

# THE Soybean Digest

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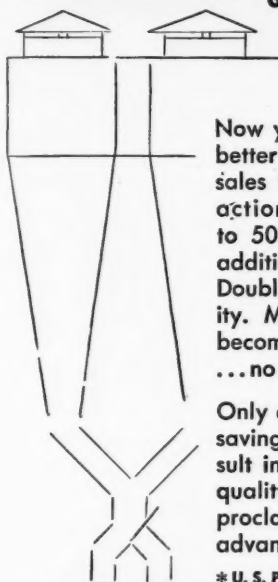
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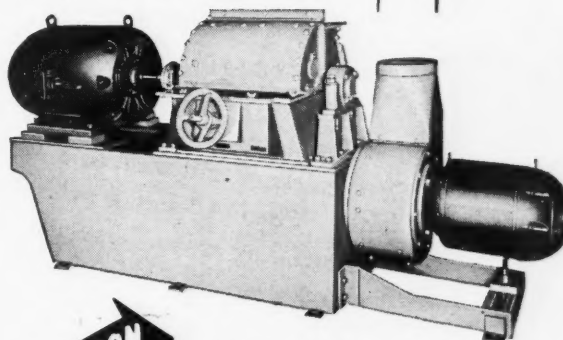
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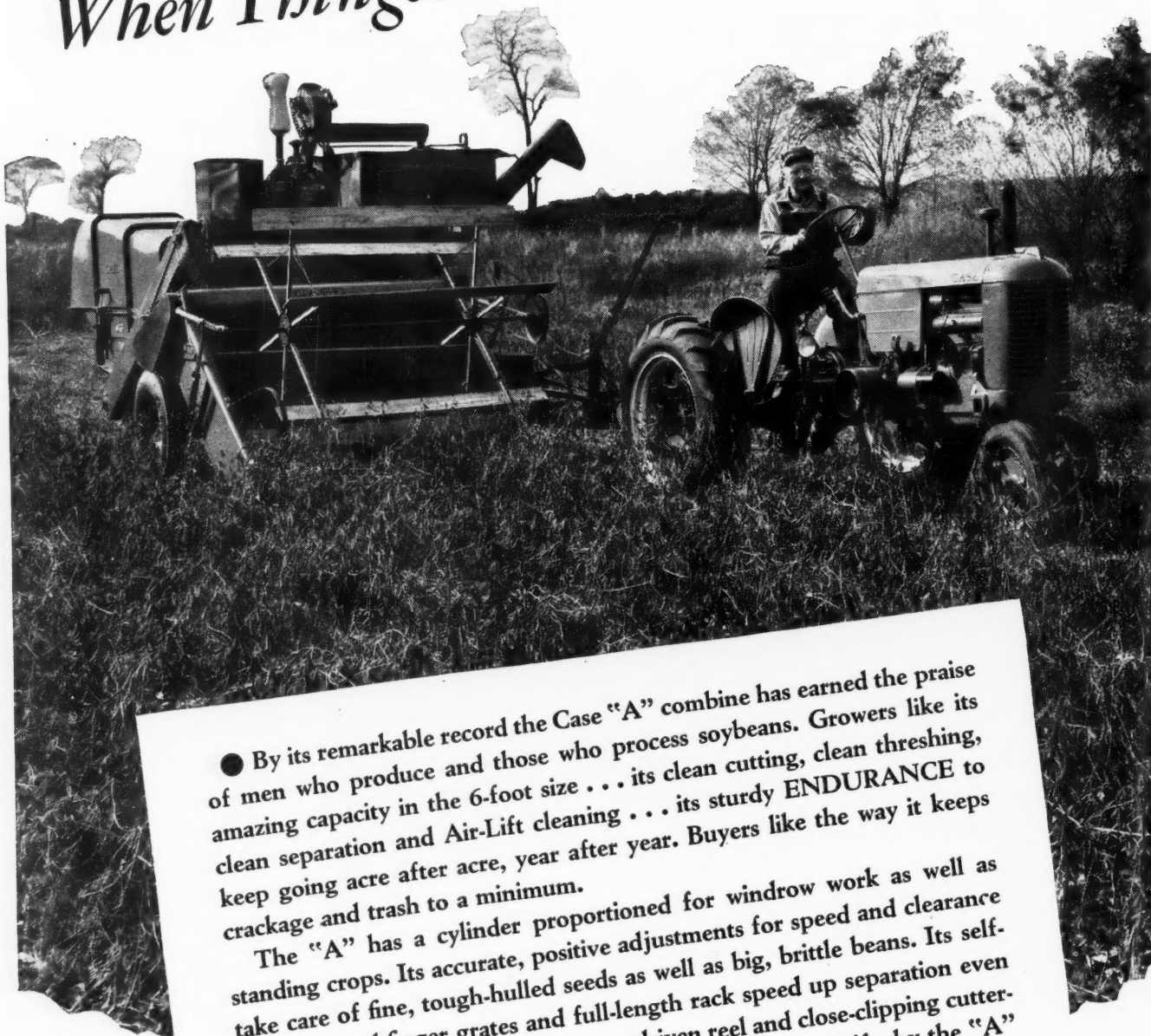
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## EDITOR'S DESK

### Better Stay with Adapted Varieties

Last year soybean planting was held up in much of the north central part of the soybean belt by an abnormally heavy rainfall in late June and early July.

Many fields that had been planted at the usual time had to be replanted. When farmers were finally able to get into the fields there was little chance of standard varieties maturing. This was especially true in Iowa.

The day was saved by heroic efforts by a number of men and agencies to bring in seed of very early varieties from regions further north. A considerable acreage of such varieties as Flambeau and Mandarin, normally grown in Minnesota and other more northern areas, were planted in southern Iowa in 1947.

These varieties did produce a good crop last year. Growers were pleased. They would not have had a crop at all otherwise. But now we understand some farmers in these central regions plan to hold seed of these varieties for planting this coming spring.

If they do they will be disappointed. These varieties are out of their range of adaptation. In a normal year they will produce a much smaller crop than standard varieties. Last year's results were unusually good.

Growers will be well advised to stick to the varieties recommended by their experiment stations for their particular localities. It would be just as great folly to plant varieties that would not take full advantage of the growing season most years as it would have been to plant varieties that had no chance to get ripe at the abnormally late planting date last year.

To plant soybean varieties that are too early or too late for your latitude will not pay off in the long run.

### Toward More Orderly Market

Figures on farm storage of soybeans released by the Bureau of Agricultural Economics January 1 and carried elsewhere in this issue show a much higher percentage of the 1947 crop is still being held on the farm than has been true for a number of years.

This has made for much more orderly marketing than was true a year ago. At that time the rush of beans to elevator and processing plant became overwhelming at harvest. It placed an undue strain on all market facilities. We believe holding back the soybeans has also had a good effect on the market. The Chicago cash price early in January was well over a dollar above the price growers who sold direct from the combine received.

We hope that growers will arrange for more farm and country elevator storage for the 1948 crop; and that an orderly system of marketing that will include farm storage of a large part of the crop, will materialize over a period of years.

With the experience of 1947-48 and past years in mind, it is not now too early to begin planning for that extra storage to be put into use next fall.

### Cultivate the World Market

The shortage of fats and oils all over the world has focused attention on remedial measures. Exploration of the possibilities of producing soybeans on a large commercial scale in East Africa is underway, as described in an article carried elsewhere in this issue. The British Government is also making plans to produce large quantities of peanuts on that continent. If those projects succeed, they are merely the forerunners of many others which will be launched in that part of the world.

For the first time in generations the United States has substantial quantities of oilseeds produced within our own borders—enough of them that for the first time in history we are producing our own needs and at the same time exporting quantities. Soybeans supply about 60 percent of all the vegetable oil produced here at the present time.

As we have repeatedly pointed out on these pages, European countries do not and can not produce sufficient fats and oils for their own needs. A large market for oilseeds and vegetable oils will exist there as soon as those peoples get back on their feet. Soybeans, because they produce more pounds of oil and more pounds of protein on the same acre of ground than any other crop we grow commercially, are in line to be a major export commodity.

A vegetable oil marketing specialist attached to the office of foreign agricultural relations of the United States Department of Agriculture is needed. That specialist should spend time in Europe endeavoring to obtain markets for any surplus supplies of vegetable oils or oilseeds produced in this country. He should investigate and analyze competition of oilseed production in other parts of the world, periodically reporting that information in person to the vegetable oil groups in the United States. Provision could be made for such a specialist under the Federal Research and Marketing Act of 1946. We recommend to Administrator E. A. Meyers the appointment of such a man at an early date.

### ASA Meeting to Memphis

The 28th annual convention of the American Soybean Association will be held at the Hotel Peabody in Memphis, Tenn., on September 13, 14 and 15, 1948, according to announcement of the board of directors. This will be the first time in many years that the ASA convention has gone into the Deep South, and one of the largest and most unusual conventions in history is expected.

Present plans call for two days of formal sessions on Monday and Tuesday, with a field trip through the soybean and cotton country of adjoining Arkansas on Wednesday.

Details of the convention program will be unfolded on these pages in coming months as features are confirmed. In the meantime, make your plans now to enjoy the hospitality of the Deep South—draw a ring around the dates of SEPTEMBER 13, 14 and 15—and start making plans now to attend.



**1948 Blue Book Is Coming** Early in March the 1948 edition of the *Soybean Blue Book* will appear. Copies will be mailed to all paid-up members of the American Soybean Association.

The new *Blue Book* will carry the same type of statistics and general information on the industry as the 1947 edition, first to be issued. It will, of course, be brought up to date. The 1948 edition will be a larger *Blue Book* with additional information that did not appear in 1947. We have incorporated in it a number of suggestions made by our good friends in the industry after the 1947 edition appeared.

The *Blue Book* from the first was accorded a very good reception. It has, we feel, filled an industry need not heretofore met by any publication. We hope the new edition will meet the needs of the industry even better than did our first attempt.

**Soy Products in Motion Pictures** "Progress in Products," a 16-mm. sound motion picture film, in black and white, will be introduced by the American Soybean Association and the National Cotton Council about March 1. Final approval of the com-

pleted film was given at a meeting of the executive committee of ASA in Chicago February 3. Additional prints are now being made, and will be available for showing at local meetings of farm groups.

Designed for use by farm groups, both men and women, and for home economics classes, Parent-Teacher organizations, agricultural classes and similar assemblages, the 25-minute film deals with new methods of modifying materials to produce the many things we need for modern living. Progress is then emphasized as a result of man's ability to take the best qualities of nature's products and by combination and alteration make them better suited to his requirements.

The usage of soybean oil and cottonseed oil in the production of margarine is used as an example of a new product employing new methods. The various farm products going into margarine, the result of that demand on farm markets, and the processes employed in the production of margarine, the second largest user of soybean oil, are then portrayed.

Bookings of the film may be made through the office of the Secretary, American Soybean Association, Hudson, Iowa.

## MARGARINE TAX REPEAL NEEDS SUPPORT!

### Contact Your Congressman Now

*(Just as the DIGEST goes to press, word reaches us that Congressman Robert J. Corbett of Pennsylvania has introduced H. R. 5292, the bill proposed by the American Soybean Association and National Cotton Council, in the lower house of Congress. This bill would repeal the 10-cents-per-pound tax on margarine made from domestically produced fats and oils. Write your Congressman at once, setting forth your views on this bill.)*

Progress on the campaign to repeal the federal tax of 10 cents per pound on yellow margarine made from domestically produced fats and oils has not been as rapid as anticipated. The hoppers of both the Senate and the House of Representatives are full of margarine tax repeal bills, all of them introduced by Southern Democrats or by representatives of consumer groups in the large cities. None of those bills, however, are satisfactory to the American Soybean Association and the National Cotton Council.

Ten representatives of the American Soybean Association spent three days in the nation's capital in early January contacting Congressmen and Senators from the Midwest region, acquainting them with our proposal and with the importance of the soybean crop in American agriculture. Many of those men, purportedly representing their respective states or districts, have spent so much time in Washington in recent years that they were astounded to learn of the importance of the soybean crop in their territories. Times have changed, and in many cases our Congressional representatives have not kept pace. To many of them the mention of the word margarine still brought forth visions of tropical oils and the coconut cow. Many did not realize that margarine is now a strictly domestic product.

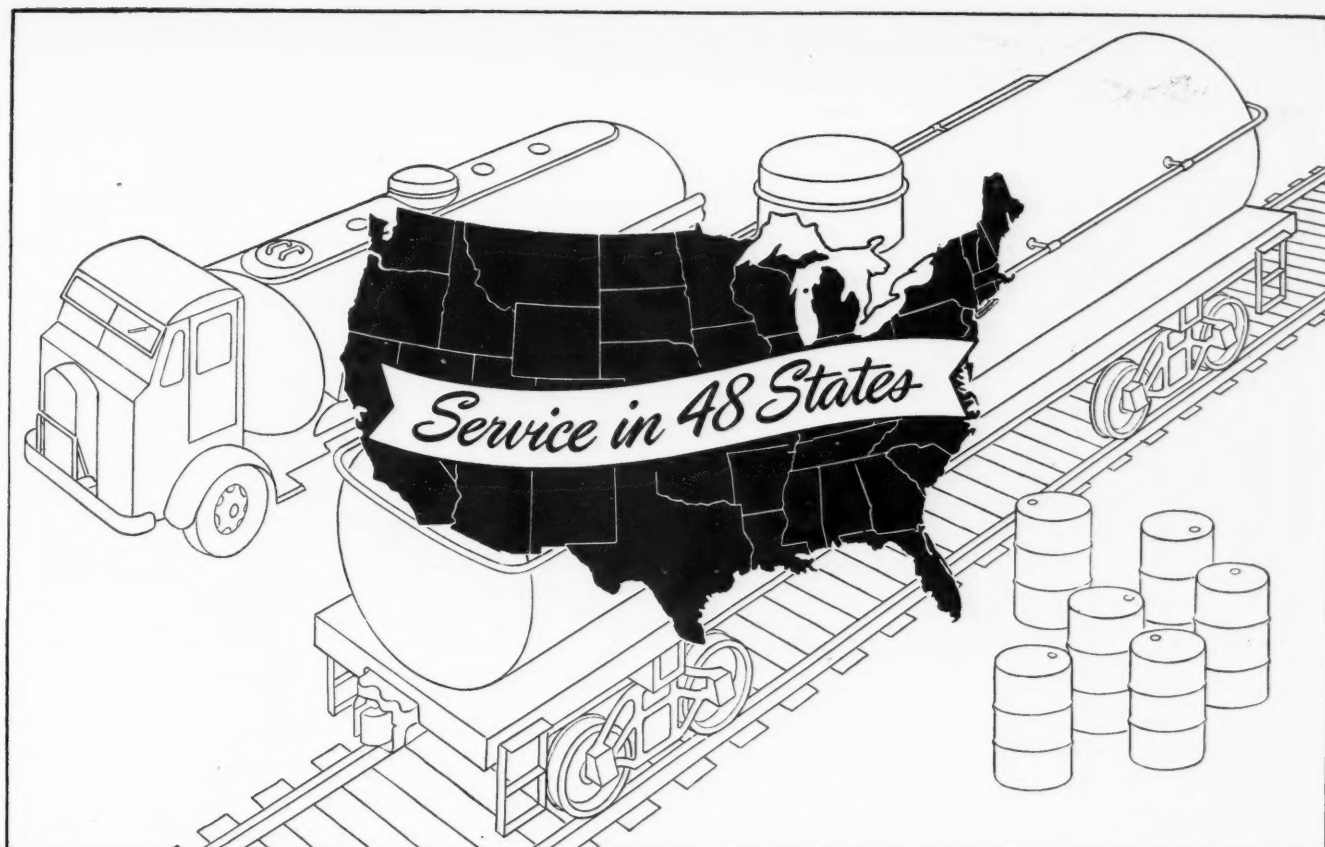
Clifford R. Hope, chairman of the agricultural committee of the House of Representatives, has promised hearings on margarine repeal legislation in early March. As soon as dates are definitely established plans will be made to have representatives of the American Soybean Association appear to present the stand of the association.

That stand, as has been true over a period of years, will be that favoring the repeal of the 10-cents-per-pound tax on all yellow margarine made from *domestically produced fats and oils*. Margarine made from imported fats and oils would continue to carry the 10-cents-per-pound tax when colored yellow, and even 1 percent of imported oil would make the product subject to the full tax.

The National Cotton Council, in their annual convention at Atlanta, Georgia, in Mid-January, passed a resolution endorsing the position of the American Soybean Association on margarine legislation, and promising full support of their organization and their representatives in Congress. This position had been previously outlined by the executives of the National Cotton Council, hence the formal resolution was an endorsement.

As this margarine legislation progresses the state directors of the American Soybean Association will be calling on members in their respective states to contact their representatives in Congress to support the ASA bill. Without support from back home there will be no repeal, and thus no widening market for soybean oil. The market for your crop depends upon the willingness of growers to actively and vocally support legislation when it is up for consideration. Be prepared to do so when the right time comes.





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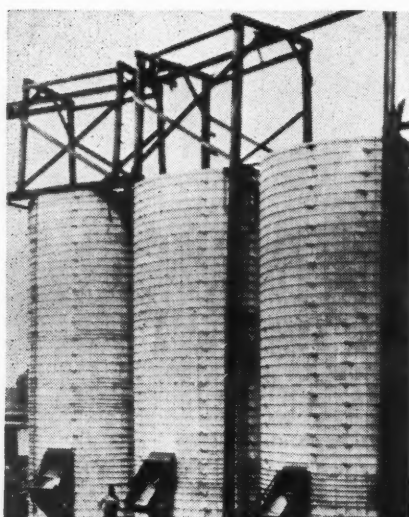
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## GROWERS

### Missouri Winner

Harry A. Plattner, Malta Bend, Saline County grower, was winner of the 1947 Missouri Soybean Achievement Program, A. F. Stephens, agricultural agent for the Gulf, Mobile & Ohio Railroad Co., announces.

Plattner, who is American Soybean Association director from Missouri, won with a field of Lincolns that averaged 36.7 bushels per acre. This was the second time for Plattner to win the Missouri state soybean contest as he was winner of the first Missouri Achievement Program in 1943.

Plattner was the only one of 218 farmers entered who qualified for a medal in 1947. Gold medals were offered to growers with yields of 30 or more bushels per acre; silver medals for yields of between 25 and 30 bushels.

The gold medal awarded Plattner carried the title, "Distinguished Soybean Grower," and on the face was a soybean pod and three soybean grains. The other side carried his name and yield.

Other county winners and their yields were Ray Bolomey, Pike County, 15 bushels; and John Schindler, Audrain County, 19 bushels. Farmers in Ralls and Randolph Counties also entered the contest but made no detailed reports.

Heavy rains in the spring months resulted in very late plantings. This coupled with the August drought resulted in the lowest yields experienced in Missouri for a number of years. However, 46 growers in the various counties made detailed yield reports. In Audrain County, in spite of low yields, 38 farmers made detailed yield reports because of their interest in the program.

The contest is sponsored each year jointly by the Missouri agricultural extension service and the Gulf, Mobile & Ohio Railroad Co.

### Iowa Contest

W. N. Moore, soybean grower of Iowa Falls, was first place winner in the Iowa

Soybean Yield Contest for 1947.

Moore was awarded first place money, the title of Iowa champion soybean grower and the John Sand trophy at the meeting of the Iowa Corn and Small Grain Growers Association at Ames, during Farm and Home week February 10. The presentation was made by Geo. M. Strayer, secretary of the American Soybean Association.

Moore won the contest with 5 acres of Bavender soybeans that averaged 36.96 bushels per acre. This was the highest yield of any Iowa contestant in 1947, but much below the record yield of John Knudson, Albia, in 1946. Knudson's field of Lincolns averaged 52.26 bushels.

Second place winner was Raymond W. Randell, Oskaloosa, whose field of Lincolns averaged 32.88 bushels. Third place went to Joe Barbaglia, Centerville, who also won with Lincolns, averaging 30.73 bushels.

District winners and their yields were: district 1, F. A. Albright, Hartley, Richards, 27.43 bu.; district 4, Wayne Weltzheimer, Sac City, 26.46 bu.; district 5, W. N. Moore, Iowa Falls, 36.96 bu.; district 8, Paul Lundvall, Boxholm, Lincoln, 26.21 bu.; and district 11, Raymond W. Randell, Oskaloosa, Lincoln, 32.98 bu.

### Watch Germination

Farmers planning to grow soybeans this year will do well to have their seed tested before planting it, E. P. Sylwester, acting head of the Iowa State College Seed Laboratory, warns. It may mean the difference between an 80 and a 100 percent crop next fall.

Sylwester has ample reason to back up his warning. Samples of soybeans tested so far this year at the laboratory have germinated unevenly and sometimes very poorly. The seedlings lack vitality. In many instances they are unable to discard the seed coat.

Sylwester thinks the extremely hot and dry growing conditions under which the soy-

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beans matured last fall may account for this lack of vitality.

However, the situation is not alarming, he says, if the soybean seed is tested before it is planted. If a farmer knows beforehand that his bean seed will germinate unevenly, he can increase the rate of seeding to make up for the lowered rate of germination. In that way farmers can get a good stand even with poor seed. Heavy stands mean cleaner fields and bigger yields.

### Fertilizing Soybeans

With good stands of adapted varieties, yields of 25 to 40 bushels per acre of soybeans can be regularly expected if dolomitic limestone is added to the soil in accordance with its requirements and phosphorus and potash supplied as needed, W. L. Nelson, associate agronomist of the North Carolina Experiment Station believes.

The lime requirement should be determined by a test and an application of 300 to 400 pounds per acre of 0-10-20 or its equivalent made in bands at the sides of the seed. If side-placement equipment is not available, mixing the fertilizer thoroughly with the soil and bedding so there is 3 to 4 inches of fertilizer-free soil below the seed are advised. If a heavily fertilized crop such as Irish potatoes is followed, no additional phosphate and potash are recommended.

### Gas Shortage?

"There is a growing concern about the supply of gasoline when the farming season arrives which isn't too far distant," writes J. E. Johnson, Champaign, Ill. "With mechanized farming, gasoline is the life line. This is a matter of serious concern, one that deserves attention and managing that will prevent a scarcity.

"Nothing constructive about requesting the American farmer to produce more and more and in a peace time or supposedly a

peace time to produce more and more with less and less. Very few farms have horses and not enough to be of any consequence even if horse drawn equipment was available. This, like other essential and vital goods is being shipped to Europe at a time when very much needed at home."

### Rate of Planting

Higher yields from heavier plantings of Lincoln soybeans in 1947 are reported in comparisons made on the farm of Dr. A. L. Whiting in northern Champaign County, Ill.

Dr. Whiting made the comparison in 20-foot rows hand harvested. When the corn planter was set on No. 4, the stand of plants per foot of row was 15.1; pods per plant 13.66; and the yield 31.6 bushels per acre.

On No. 3 the stand was 7.45; pods per plant 20.8; and yield 29.3. On No. 2 the stand was 6.9; pods per plant 22.4; and yield 25.9.

### Tennessee Tests

Ogden soybeans gave the highest average yield of seed in Tennessee Agricultural Station tests at four places, reports the Station. Ogden was second to Volstate in yield of hay.

The standard Tokio variety also gave a creditable performance, the Station reports. Such varieties as Tokio, Volstate, and U. T. 296 might be classified as late-maturing; Ogden, Arksoy, Delsoy and Easycook as mid-season; and Macoupin, C-185 and F. P. I. 84922 as early-maturing varieties in Tennessee.

### DDT Stops Webworms

When webworms threatened his 40-acre soybean field last fall, Clyde Priddy, Mason County, Ill., sprayed with DDT. Before spraying there were as many as 60 worms on one leaf. Four days later a ten-minute search netted only one worm.

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## LETTERS TO THE EDITOR

### Breeding Problem

To the Editor:

Down here the Ogden seems to be the only variety for the main crop, so far, but after a dry growing season they shatter so rapidly that there is extremely heavy loss if harvesting is delayed any at all.

However there seems to be no other variety in this medium early group that is any better in this regard. Some "shatter-proof" varieties don't show up any better.

Later varieties Volstate and Roanoke seem much more shatterproof, but the later maturity is more apt to throw harvesting into extremely wet weather.

I understand that the Ogden is supposed to be a rather uniform variety and that selection isn't supposed to help any, but last year there was a rather large acreage abandoned account of a long wet period. And

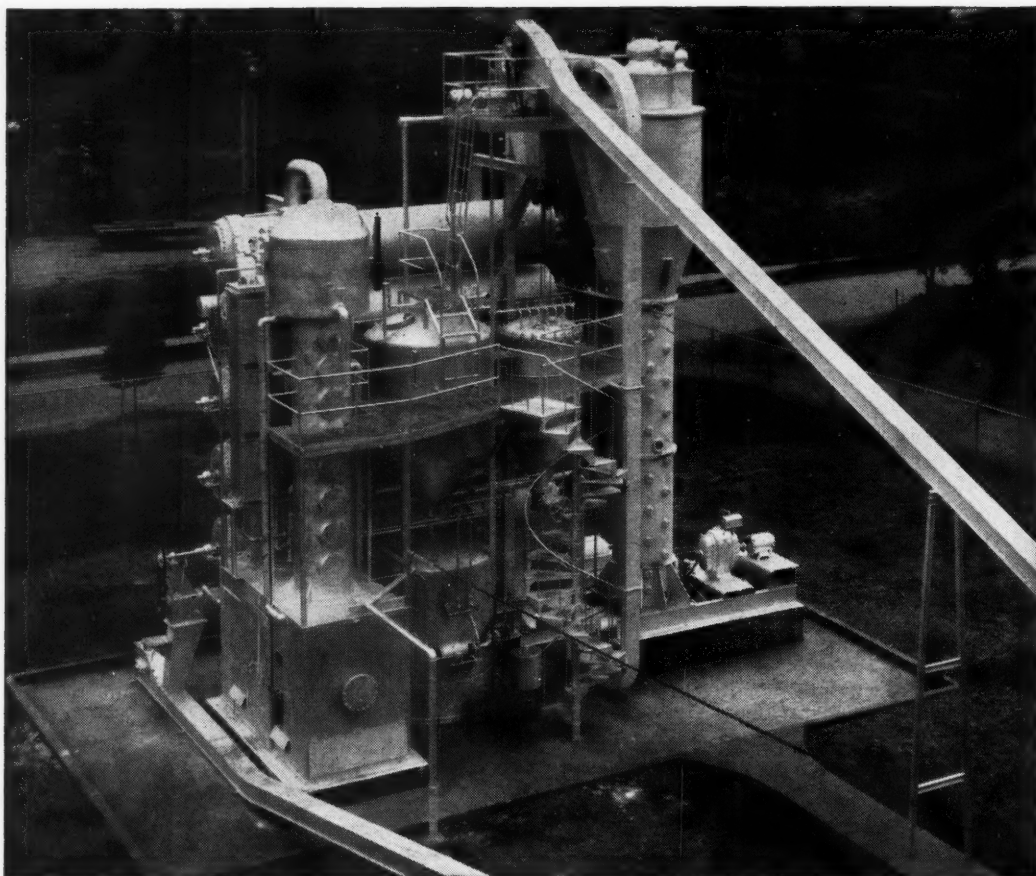
it has been noticed that there are many stalks standing with quite a number of pods still on, while most of the others are about 85 or 95 percent shattered.

I wonder if there could be any possibility of making any improvement by saving seed from some of these plants — or would it be that probably these that haven't shattered so badly were influenced by some different ENVIRONMENT, and that the apparent shatter resistance is due to this, rather than to any INHERENT resistance?

It would be quite some trouble, as pulling up plants, separate threshing, and plant-to-row seeding would be necessary, and I'd hate to lose several days on a useless task. Mutations are scarce. They may be absent in soybeans.

Any ideas? —W. C. Sharbrough, Holly Bluff, Miss.





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This may look like a jungle, but it's a highly productive one. D. L. Kelly, DeSoto Parish, La., plants corn and soybeans together. Last year he picked 105-bushel-an-acre corn, and harvested a 35-bushel-an-acre bean crop.

# 3 CROPS A SEASON

Corn, Soybeans and Beef on the Same Ground

By CHARLES W. PRICE, JR.

Reprinted from FARM JOURNAL

Here's what D. L. Kelly did on 100 acres of land last year:

He grew 10,500 bushels of corn.

He produced 3,500 bushels of soybeans.

He provided forage for 75 steers for 90 days.

That, in case you are doing some figuring, means that each one of his acres produced 105 bushels of corn, and 35 bushels of soybeans. Pretty fair yields.

And where Kelly got those yields is of interest, too. He wasn't in the Midwest, as you might think. Kelly farms 700 acres in DeSoto Parish (county) in northeastern Louisiana. Here's how he makes his soil do that triple production job.

He plants his corn and soybeans in the same row, the soybeans very thick, and the corn only 8 to 12 inches apart, instead of 24 to 36 inches, as is customary in the South.

When the corn is ripe, he has it picked by hand, not with a picker, to avoid crushing the beans. When the beans are ready he uses a six-foot combine. If he waits until after the first frost, the corn stalks are brittle, and cause little or no trouble when the combine is used.

After the bean harvest he turns in Hereford calves, weighing 500 pounds or so.

After 90 days on his cornstalk-bean pasture, and another 90 days on feed, the steers, weighing close to 1,000 pounds, hit the market.

Then Kelly plows the rest of the stalks and soybean vines under to help keep organic matter high in his soil, which naturally is on the light or sandy side.

When southern farmers see Kelly's farm, they usually are impressed with four main things:

1. He spaces his corn a third closer than most southern farmers.
2. He fertilizes heavily.
3. He provides a clean seed bed.
4. He plants corn and soybeans together in the same rows.

Kelly's success with closer planting and heavy feeding flies directly in the face of recommendations from most southern Experiment Stations.

But this year the Louisiana Experiment Station started experiments with closer spacing, and the Mississippi Experiment Station reported "striking" results in similar tests.

In Mississippi, the corn was spaced about as Kelly spaces it, and heavy fertilization was used. After the first year, USDA crops men suggested that close spacing and heavy plant food applications "may revolutionize corn growing in the South."

In addition to plowing under the stalks and vines of the previous year's crop, plus

manure left by the cattle, Kelly puts on 300 pounds of 6-8-4 fertilizer to the acre. Later he side-dresses the rows with 125 pounds of nitrate of soda per acre.

He is a firm believer in the old saying, "Cultivate before you plant."

He plows his fields four times before the corn and soybeans are ever planted, and only twice after the two crops come up. Most southern cornfields need cultivating nearly every week to keep ahead of the weeds.

Along in December, 1946, Kelly gave his 1947 corn crop its first cultivation—that is, he plowed under the cornstalks, soybean vines, and manure.

Then in January, a month later, he broke the land again, "to let it get warm." Three or four weeks later he plowed it again, smoothed it up with a harrow, and put on fertilizer. Then he turned the soil again to cover the fertilizer. On March 28-29 he planted, using about 10 pounds of corn and 2½ bushels of soybeans per acre.

On April 15, after a cold and exceptionally rainy spring, Kelly's corn was seven inches high. Most of his neighbors were replanting theirs.

Kelly is certain that his seed bed, fertilizer application, and especially the soybeans, helped his corn. He has definite ideas how corn should be cultivated.

"I go through my corn with two-row cultivators the first time, using shields to protect the plants. Then later on I cultivate again, but very lightly. I think a lot of folks cultivate their corn to death. Hybrid corn in particular sends out long root systems, and if you cultivate it too deep, you'll prune them off, sure as shootin'."

Drought cut Kelly's yields this year, as it did those of growers in the Cornbelt. Even so, his crop will average about 65 bushels an acre.

His methods are revolutionary as far as southern corn growing is concerned. But in 1946 when his crop averaged 105 bushels, the average for the whole South was around 20 bushels per acre. Maybe we can stand more of Kelly's revolution.

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## RULING FOR PILLSBURY

Bradshaw Mintener, general counsel for Pillsbury Mills, Inc., Minneapolis, announced the company had won a "complete victory" in a legal suit involving use of Pillsbury's registered trademark, "Golden Bake" for a soybean pancake flour.

The U. S. Supreme Court has denied review of the case requested by Soy Food Mills, Inc., Chicago.

The case against Pillsbury was brought by Soy Food Mills which has been notified that the trademark, "Golden Soy Griddle Mix," was an infringement of a Pillsbury trademark registered as far back as 1935 and used on a pancake flour by Pillsbury since 1936.

In a trial in U. S. District Court in Chicago before Federal Judge Walter J. La Buy, the finding was against Pillsbury. This finding was reversed by the circuit court.



# *A Farmer*

# LOOKS AT CHEMURGY



"Dave" Wing has long been one of the most active members of the American Soybean Association, is a former president and former director of the Association. In addition to chemurgy, he is particularly interested in the legislative field. Here he is at the American Soybean Association field day at Ohio State University in September, 1947.

## By DAVID G. WING

From paper presented at meeting of National Farm Chemurgic Council

I WILL try to give you my personal reactions to Chemurgy. Having been born and raised in Ohio on a typical Cornbelt farm, you would naturally expect my interests to be more eastern and rather far removed from Oklahoma.

On the other hand, we have two rice farms in Arkansas, and I have for years purchased cattle and feeding lambs from Texas and Oklahoma to be fed off in our Ohio feed lots. After all, livestock were our first chemurgists, for in an early day, all we

knew about waste products and surpluses in agriculture was that animals could use some of them and turn them into meat, milk, and wool.

Of course, this was, and still is, a speculative process. There is a great deal of expense incurred between the grass of Oklahoma and the packing house in New York City where our great consuming public gets a chance at a choice beefsteak or a leg of lamb.

My father, Joe Wing, taught me that all our alfalfa and corn should be fed on the farm to livestock so that the manure could be hauled out on the farm, thus maintaining soil fertility.

## 10-Year Cycle

By following this practice, we built our land up to a high state of fertility, but at the same time, we practically went broke every 10 years when the economic cycle knocked the price structure down to where we would sell in the spring, lambs and cattle for less than we paid for them the fall before. We have all found out that you can't make money that way. I am still feeding cattle, but mostly calves that we raised ourselves on our rice farms in Arkansas or on our own pastures in Ohio.

But, you say, where does chemurgy fit into this picture? As far back as 1904 when the soybean was first imported from the Orient, my father and his two brothers started raising a few soybeans, which we laboriously cut by hand, threshed, and sold for seed, mostly to farmers who raised them for hay and silage.

One of my first recollections of a soybean field was when I was about 12 years old, trying to keep up with the hired men while they cut the almost ripe soybeans off at the ground with a hoe rather than with a mower or a binder, because they shattered so badly. We then shocked them with a fork and threshed them when they were dry.

It took a quarter of a century for this same soybean to come to the front in the United States. The agronomist had to develop new varieties which would not shatter and which would yield well and stand up for combining. It was the combine harvester that really established the soybean as a major grain crop.

But even then, the few bean growers could not dispose of all their crop for grain, and it was not until our great processing industry, led by farsighted men like A. E. Staley of Decatur, Ill., was established that the soybean really found its place in American agriculture.

Thus in 25 years the obscure soybean crop has increased from nothing to 200 million bushels in 1946. At the present market price these beans are worth three quarters of a billion dollars to American agriculture.

When the second world war came on, Japan cut off most of the tropical oils from the United States. This vegetable oil shortage was made even more severe by a short cotton crop. Through the efforts of the U. S. Department of Agriculture, the state extension departments, and the American Soybean Association, the soybean came to the front and helped supply this shortage of vegetable oil, a life-saver to our national economy. Over 80 percent of this soybean oil is going into human food consumption.

Besides soybean oil, the soybean is now supplying a large part of our protein supplement in the form of soybean oil meal. This was a vital factor in the production of beef, pork, and milk in the last 5 or 6 years, when cottonseed and linseed meal were practically impossible to get in the Cornbelt.

I am giving the soybean as an example of a chemurgic crop, because it is one of our more spectacular developments in late years. Now the chemists tell us that we have only scratched the surface, and that we can expect anything from glue to plastics, and from synthetic rubber to paint, from this selfsame little bean. At the present price of soybean oil, which of course is too high, the oil alone in a bushel of beans is worth almost \$2.00 per bushel (soybeans were quoted above \$4.00 when I left home).

## Price Contrast

Contrast the present price of soybean oil with the  $4\frac{1}{2}$  cent price we had to take 10 years ago, before our chemists had learned to refine and hydrogenate the oil. I had lunch last week with an oil buyer who was putting in his time trying to get enough soy oil to keep his margarine plant supplied.

Of course, there is still a great shortage of both animal and vegetable fats in the world, which accounts for the high price of butter, margarine, shortening, and drying oils for paint. With a short flax crop last year, linseed oil is almost prohibitive, so industry could use large quantities of soy oil in paints, linoleum, and oil cloth if they could get it away from the vegetable shortening and margarine manufacturers.

Now you say, what will happen to the price of soybeans when the cheaper coconut and palm oils come back from the South Pacific? That, of course, is the \$64 ques-



tion, and no one has given us a complete answer as yet. As I look at it, there are two answers: We must have some protection from the cheap labor and low living standards of the South Sea Islands, and we must develop the chemurgic possibilities of our domestic oils. No matter how much trade we give the natives of the East Indies, they will never have the buying power or create as much wealth in these United States as our own American farmers.

For example, in the period 1925-1929, fats and oils in the tropics were approximately 5 cents per pound. We had a national income averaging 78 billion dollars, full employment and prosperity. In 1932, jungle fats and oils sold for less than 2 cents per pound. Our foreign exchange, created by buying a billion pounds of fats and oils, had dropped from 50 million to 13 million dollars. In addition, and of far greater importance was the fact that these imports had forced down our price level on fats and oils and other products, so that instead of the 78 billion dollar national income in 1925-1929, our national income had dropped to 39.9 billion in 1932, and we were in the midst of our worst depression.

I hope we have learned our lesson and that our government will be farsighted enough to give the American farmer a parity price protection against foreign fats and oils. All economists now agree that when farm income drops, our national income drops in the ratio of 7 to 1.

Every man on the farm is now feeding about seven men in the city. Likewise, our national income is about seven times our farm income. In other words, if our gross farm income increases 1 dollar, it will add 7 dollars to our national income.

There is always that old argument as to

which comes first the chicken or the egg; but under any consideration, we do know that in 1921 farm prices broke first and again in 1931 the same thing happened, thus creating the two greatest depressions in our national history. It was at this time, that soybean and cottonseed oil went below 4 cents per pound, dragging lard, butter, and all farm commodity prices along with it. It was not so much a matter of over production as it was a lack of distribution of our surpluses of perfectly good food, badly needed by many countries of the world.

At present, we need progressive leadership in tariff policies in the United States. In trading with the rest of the world, we must either make an adjustment of the selling price of our exports to their income level, or by agreement use the American parity level as a yardstick for world prices.

Now let's get back to the chemurgic possibilities of the soybean. Chemistry has developed so fast in the last 10 years that the digestive system of the cow has not kept up with the chemical laboratory. As I have stated before, our early production of soybeans was used entirely for hay and silage, while the beans were ground up whole for hogs and cattle. Soon we found that too many soybeans in a hog's diet produced soft pork and a low quality lard that melted very easily in warm weather. Government posters appeared in all stockyards and packing houses warning farmers not to feed too many soybeans to hogs because of the inferior pork and lard which resulted from their use.

Now this has all changed. Our modern soybean processing plant heats and crushes the bean before dissolving out the valuable oil with a suitable solvent. There are still a great many expeller type plants in operation, but as oil becomes more and more valuable,

the solvent process is coming into its own, because of its efficiency in saving practically all the oil in the bean. The more oil we get out of the bean, the higher the percentage of protein left in the meal, so most of the soybean meal on the market today has 44 percent protein.

We can now safely feed this meal to our livestock without making soft pork or low quality lard. Milk, beef, hog, and egg production was maintained during the war, and although we are short on meats in our butcher shops today, it is not so much under production on the part of the farmer as it is the fact that the consuming public has more buying power than ever before in our history. This is brought about by a 10 percent increase in population and by the fact that we have almost 60 million people at work in the United States. Thus we are consuming 15 percent more food than ever before in our history. Working men and women are eating more dollar pork chops, and two dollar steaks than ever before. Along with this 10 percent increase in population and 15 percent increase in consumption, the government is exporting 5 percent more food for foreign relief, so that our 30 percent increase in farm production so far has been used up.

### Paint Market

If the time ever comes when the margarine, shortening, and salad oil manufacturers get enough soybean oil, my old friend Matt Taggart will show us how to use up several million pounds of soy oil in paints and varnishes. A small appropriation in one of our Regional Laboratories would give us a good soybean paint oil, which when oils get back to normal in price, could supply our paint oil needs. This is in view of the fact that soybeans can be grown over so much wider an area in the United States than flax. In good producing areas the soybean will yield more oil per acre than the normal yield of flax in our northwestern states where it thrives best.

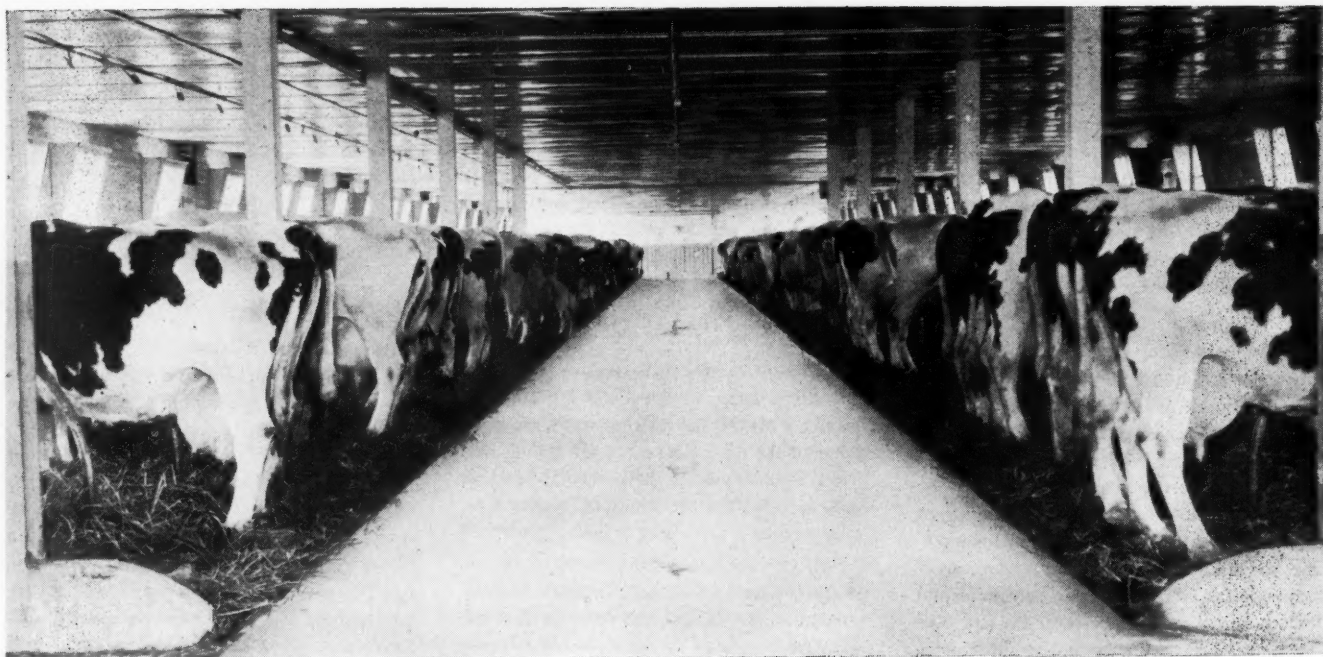
It is hardly necessary for me to name the long list of chemurgic products coming from soybeans. Here are a few of them: Soy oil and meal, plastics, synthetic wool and silk, fire extinguishing foam, plywood adhesives, male and female hormones for medicine, lecithin, paper coatings, synthetic rubber, and others too numerous to mention.

I have rambled around from livestock to soybeans and from chemurgy to tariffs. All these questions are constantly on my mind. I do feel that we must watch our tariff and our surplus problems. We must use great care in Washington as to how these issues are met and see to it that our representatives down there have wise counsel.

But, on the other hand, I do feel that the chemist who works out the utilization of our agricultural crops and by-products may do more toward the stabilization of our domestic economy than all the politicians we might send to Washington.

The home on Woodland Farm near Mechanicsburg, Ohio, where David G. Wing was born and raised. He remembers helping to harvest soybeans on this farm when he was 12 years old.





Interior of barn and some of the 128 cows used in four of the five feeding trials for determining the fat requirement in dairy grain mixtures.

# EVALUATION OF SOY PRODUCTS

in feeding dairy cattle

By C. F. MONROE

Associate in the Department of Dairy Industry, Ohio Agricultural Experiment Station, Wooster, Ohio

**T**HE EXTENSIVE use made of soybeans and soybean oil meal in feeding dairy cows is indicative of the value of the products in the dairy ration. It is not the intention of this discussion to review the literature on the subject, but rather to present certain phases of current importance.

Reviews of the literature have been made by Dr. J. W. Hayward<sup>1</sup> in a report of the Soybean Nutritional Research Council and by the writer<sup>2</sup> in an article prepared for the American Soybean Association. These reviews indicate that soybeans and soybean oil meal can be used satisfactorily in the dairy ration.

Increased confidence in the previous work has arisen from the better understanding of the predigestive processes taking place in the rumen of the cow. Thus, the nutrition of the cow, as a ruminant, is characterized by certain peculiarities not possessed by non-ruminants. This is well illustrated in the results that have been obtained in feeding soybeans and soybean oil meals.

## Feeding Ground Soybeans

During war years when high protein feeds were difficult to obtain, some dairymen re-

sorted to raising soybeans for the express purpose of insuring themselves a protein supplement. That moderate amounts of ground soybeans can be used in dairy grain mixtures has been well established both experimentally and in practical feeding. More recently in working on the fat requirements we<sup>3</sup> have found that the grain mixture could contain 10 percent ground beans. Likewise, in one of the Cornell trials<sup>4</sup> of a similar nature 15 percent beans were included with good results.

Just how much in excess of these amounts may be fed satisfactorily is a question. This may depend on the rate of grain feeding and on the other constituents in the ration. Hayward<sup>1</sup> states that there "is the tendency of soybeans, because of their high oil or fat content, to produce scours in cattle when fed in any large quantities especially if the silage part of the ration is restricted appreciably." At the Iowa Experiment Station<sup>5</sup> a group of cows were fed continuously for a period of 22 weeks on a ration of cracked soybeans and silage, with bonemeal and salt in addition. "Up to 9 pounds daily of soybeans were consumed by a single cow. No indications of nutritional deficiencies were observed." The production of the cows so fed compared favorably with that of a group fed in a normal manner.

Admittedly, this represents an extreme in

feeding, but it illustrates the fact that the dairy cow can utilize soybeans.

## Comparative Feeding Costs

"Shall I feed my soybeans or should I sell them and buy the meal?" This is a question frequently asked, with, of course, economy reasons in mind. The answer will depend on the relative costs of the two feeds, but even so sometimes a little calculation is necessary. Soybeans are higher in energy value and lower in protein content than the meal. Hence, the energy values, as well as the protein values must be taken into account. Methods<sup>6,7</sup> for doing this are available. These are based on crediting the energy value at the cost of that in corn and crediting the protein content at the cost of that in cottonseed oil meal. These two feeds have been used as base feeds, because usually they furnish the respective form of nutrients at the lowest cost, although at the present time this is not quite true for cottonseed oil meal.

W. E. Petersen<sup>8</sup> has simplified the method of calculation by working out factors to be applied to the prices of corn and cottonseed oil meal. Thus a comparative feed price for soybeans may be obtained by multiplying the price of a ton of corn by .342 and that of cottonseed oil meal by .709 and adding the results together. For soybean oil meal, the factors are .010 for corn and 1.054 for



cottonseed oil meal. With corn at \$50 per ton and cottonseed oil meal at \$83 per ton, comparative feeding prices, according to this system, would be \$75.95 for soybeans and \$87.98 for soybean oil meal. *Therefore, the soybean oil meal is worth more in the feed or has a higher replacement value in the feed than soybeans.*

But, according to market prices (early 1947), a feeder would have to pay \$100 per ton for the beans, either to himself or a dealer, whereas he could purchase the meal for \$80 per ton. Of course, a change in the relative prices of the base feeds (corn and cottonseed oil meal) makes a difference in the feeding prices of the beans and meal.

### Palatability

Cows do not object to the raw-beany odor or flavor of ground soybeans and some of the non-heat-treated meals made therefrom. When three grain mixtures containing 20 percent of either expeller, hydraulic or extracted non-heat-treated soybean meal were offered free choice to a group of cows, no marked difference in preference was observed<sup>9</sup>. A repetition of the trial substituting a heat-treated extracted meal for the hydraulic meal, indicated that the heat treatment had not increased the palatability. When these various mixtures were fed separately as the grain mixture for individual cows all proved to be satisfactory as regards palatability. This is in agreement with observations in practical feeding.

Palatability of soybean oil meals may be influenced by factors not necessarily inherent to the method of processing. One of these is the fineness of grinding. Cows object to a dusty feed, that gets in their nostrils.

In one trial, the various supplements were offered free choice as grain mixtures. A marked preference was indicated for the expeller meal over both the hydraulic and extracted meals, both of which were finely ground and dusty in nature. When these meals were mixed with other feeds as in a grain mixture, the dust factor was reduced and the animal acceptance was improved. For feeding dairy cows the meals should not be too finely ground.

### The Fat Question

The high prices to be obtained from soybean oil have led to the development and greater use of more efficient processes for removing the oil from the beans. Thus, the solvent process extracted meal contains less than 1 percent of fat in comparison to 4 and sometimes 5 percent of fat in the expeller process meal. The present indications point to an even greater output of low fat meal. Compensating for the decrease in fat is an increase in protein content.

The feeder of milking cows is interested in how these changes in the composition of the soybean oil meal will affect the value of his grain mixtures. Of special interest is the question of the fat content of the grain mixture, since the work of the Cornell Experiment Station has called attention to this problem. A popular summary of this



The type of rack used in individual box stalls for determining the relative palatability of different soybean oil meals.

work and a general discussion of the fat question has been given by Loosli<sup>10</sup>.

A series of feeding trials has also been conducted by the Ohio Agricultural Experiment Station<sup>3</sup> on the relationship between the fat content of dairy grain mixtures and milk and butterfat production. In this work, a special effort was made to face the problem in the same way as the practical feeder must do. The range of fat levels represented was not as wide as in the Cornell work, but was one representative of the types of grain mixtures used commonly in Ohio. The farm feeds ordinarily used in this state, such as corn and oats, together with wheat bran and one of the soybean oil meals, comprised the principal part of the grain mixtures. Some ground soybeans and a little linseed oil meal were used to attain the higher levels of fat.

The cows were given all the hay they cared to eat, together with corn silage as roughage. The continuous type of feeding trial with long experimental periods was used in preference to the reversal type trial in which the experimental periods are short. It was believed that the longer periods more nearly duplicated practical feeding conditions than the shorter periods of the reversal trial. Five different feeding experiments involving a total of 128 cows were represented in the work. With the exception of six Jerseys, used in one trial, all the animals were purebred Holsteins, and in four of the trials the cows were fed and milked three times per day.

In the first series of two trials, three groups of cows were fed on three different levels of fat in the grain mixture as follows: high-fat, 4.73 percent; medium-fat, 3.54 percent; and low-fat, 2.69 percent. The average production per 30 days for the 100 days of experimental feeding in terms of pounds of 4 percent milk was as follows: 932.1, 921.1, and 923.9 for high, medium and low fat

mixtures, respectively. These are small differences and they appear even smaller when considered in the light of the productions of these cows during the preliminary period, when all the animals received the same rations.

In the second series of three trials two groups of cows were fed on two levels of fat as follows: high-fat 4.89 percent and low-fat 3.19 percent. The average production in pounds of 4 percent milk per 30 days for the 90 days of the feeding was as follows: high-fat 1077.5 and low-fat 1054.3. This difference of 23.2 pounds is only slightly in excess of the difference existing between these groups in the preliminary period when all the cows received the same feed. The relationship between the productions of the two groups between the experimental and preliminary periods was 89.76 percent for the high-fat group and 89.23 percent for the low-fat group.

It was concluded from these five trials that under the conditions prevailing there were no significant differences in the production of milk, butterfat, butterfat test or in the general health of the cows from the feeding of practical grain mixtures ranging in average fat percentages from 4.89 to 2.69.

### In Simple Grain Mixture

A severe test for a protein supplement would be to feed it by itself or in combination with a non-protein feed like corn. At the Oklahoma Agricultural Experiment Station<sup>11</sup> cottonseed, soybean, and peanut oil meals were fed separately and together to supplement the protein of prairie hay in experiments with steers. From this work it was concluded: "There was no evidence to show that the protein furnished by a combination of meals was superior in quality for yearling steers to that furnished by any one of them."

At the Ohio Agricultural Experiment Sta-



tion<sup>12 13 14 15 16</sup> a series of trials was conducted comparing a simple grain mixture composed of corn and soybean oil meal with complex mixtures made up of several grain and protein supplements. The grain mixtures were adjusted to furnish approximately equivalent amounts of total digestible nutrients and digestible protein. A total of 165 cows was used in the experimental feeding. The comparisons consisted of a 40 day reversal trial; two summer feeding trials of the continuous type with experimental periods of 120 days; a calf feeding trial; two winter feeding trials in which some of the cows participating in both trials received the simple mixture for 190 days; and finally a lactation trial covering three and one-half years.

This work showed that the performance of the cows was just as good on the simple grain mixture as on the complex mixtures. This is well illustrated in the lactation trial in which the average yearly production was 12,263 pounds of milk and 408 pounds of fat on the complex grain mixture and 12,249 pounds of milk and 410 pounds of butterfat on the simple grain mixture. Fifty-one lactation periods are included in averages.

#### Summary

From the foregoing discussion it is evident that soybeans and soybean oil meal play an important part in the feeding of dairy animals. The cow, as a ruminant, appears to be peculiarly adapted for utilizing these feeds.

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### ORGANIZE ONTARIO SOYBEAN COMMITTEE

In the fall of 1946, Dr. G. P. McRostie, field husbandry department, Ontario Agricultural College called a meeting of a group which included plant breeders who were working with soybeans at the different Dominion and provincial experimental stations and processor representatives. He believed that the interests of those specially concerned with soybean improvement in Ontario would best be served by forming an Ontario Soybean Committee.

The meeting paved the way for the presentation of a resolution to the Dominion and provincial governments asking that a permanent Ontario Soybean Committee be constituted for the following purposes: (1) a

means of planned attack on soybean improvement; (2) co-ordination of work between experimental stations; (3) a clearing house for information; (4) a basis for uniform recommendation.

On December 10, 1947, the same group and, in addition, representatives of the soybean growers, met in Chatham with the sanction obtained for an Ontario Soybean Committee. Informal reports were heard from Dr. F. Dimmock, Ottawa; I. M. Roberts, Guelph; J. J. Nelson, Ridgetown, and C. W. Owen, Harrow, on the research and breeding programs being carried out at their respective stations. The recommended soybean varieties as listed in *Guide to Crop Production, 1947*, were reviewed and deletions and additions made. The A. K. and Lincoln varieties were given a new "very late" grouping. Flambeau was added to the early group with O.A.C. 211 and Manchu (Hudson) taken completely off the recommended list.

#### Growers' Problems

The most interesting part of the meeting was a discussion with representatives of the soybean growers concerning their problems. Every phase of soybean growing from planting to storing was commented on. Practical ideas were exchanged between the growers, and processors' problems brought to light. Most beneficial from the plant breeders' standpoint, were the research problems arising out of the discussion—the information the soybean growers are anxious to obtain to improve the quantity and quality of the soybean crop.

It was the general opinion that this mixed group, meeting annually, could do much for the further and sound promotion of the soybean industry which is rapidly becoming one of the major cash crops in the southwestern sections of Ontario.

R. H. Peck, Canadian director for the American Soybean Association, read the statement of objectives for that organization for 1947-48. It was of especial interest to hear of the vigorous and ambitious program being undertaken by our counterpart across the border. —I. M. Roberts, research fellow, Field Husbandry Department, Ontario Agricultural College, Guelph, Ontario.

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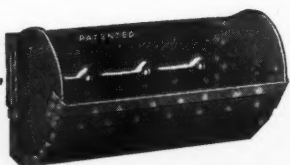
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# NOD-O-GEN

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# A LOOK AT MARGARINE

*by an Oregon Dairyman*

By MERRITT NASH

In Western Dairy Journal

• *Not all dairymen take the traditional viewpoint toward margarine. The two letters below are condensed from WESTERN DAIRY JOURNAL.*

Most of my life I have been a milker of cows. I recall so vividly when I was going to high school at Coos River near what is now Coos Bay, Oregon, the scorn and cruel ridicule that the school children heaped upon those who had oleo in their lunch sandwiches. Coos River was, as is all of the Oregon coast country, a fine dairy section and oleo was a fighting word.

Today we are still attempting to place a stigma on those who use oleo. For Heaven's sake why? Most all of my life I have made my living from producing butterfat, but I am thankful that I am not so narrow that I would regard it as the only legitimate source of a nutritious spread for the nation's bread. I refuse to waste my time, money and energies fighting the production and distribution of a highly wholesome and All-American product that has a definite place in our economy.

I would like to jot down a few of the reasons that I have for this stand.

Most people think of three things when they buy food: (1) Is it clean? (2) Is it healthful and (3) Is it within the reach of

their pocketbook? Very likely most people take the first two for granted and think only of the third. Some people ask a fourth question. Is it an American product?

Let us compare butter and oleomargarine from these standpoints. First, I am confident that oleomargarine is cleaner than butter! If you doubt this I would advise that you visit a few places where butter is made. Then I would ask that you go down and take a look at the process followed in manufacturing, for example, one of the more highly advertised margarines. Whoever you are, I will be willing to abide by your decision after you have seen both made. And as for the raw materials that go into the products, we all know that butter is made, for the most part, from the lowest grade butterfat produced. This can often be described as nothing short of filthy.

## Which Is Best?

Next, the consumer might ask: Is it nutritious and healthful? The best scientists have failed to uncover qualities in butter that make a pound of it superior in food value to a pound of the well known oleomargarine. In fact, I have talked with scientists who claim that oleomargarine is superior as a food for children for the reason that it is a vegetable fat and is more easily digested and assimilated into the child's system than is butter which is an animal fat. Doctors have told me that the most common trouble among small children is a matter of digestion and that most of this trouble comes from food that is diffi-

cult to digest. Milk with a high butterfat content is the chief offender. The child is no different from the calf in this respect, as you dairy folks well know. Butter is composed chiefly of butterfat, so draw your own conclusions.

When we come to consider the matter of the pocketbook, there is no room for argument whatsoever. At this writing a pound of butter costs almost three times as much as a pound of oleomargarine, and it has been in that ratio for the past many months.

## Comes from U. S. Farms

And, as for oleo being an American product it comes from our U. S. farms as does the butter we eat. In fact, particularly the large eastern city users, never know when the butter they use might have come over in the dank hold of some ship from one of the exporting countries of Europe. During recent years oleo has come exclusively from products grown on United States farms.

The plain fact is that millions of people in our nation cannot afford the price of a pound of butter. Yet the dairy industry places itself absolutely in the position of jamming every obstacle in the path of those who would serve their families a pound of oleo in lieu of the costly butter which they simply do not have the money to buy. Farmers are supposed to be the most "American" people alive. Now I ask you does the above sound like the act of a good American?

How long will the dairy industry stand in the path of progress? If it is possible to produce a pound of spread by machine that is as nutritious and healthful and much cheaper than the cow and the man can produce, then we are unpatriotic and unprogressive if we persist in our attempts to squelch a competing product and deprive a needful society of the savings in money and health. Think that one over for a minute.

Every year the dairy industry has spent thousands of dollars and untold hours of labor in fighting the consumption of oleo. By outright propaganda and through restrictive legislation, one of the most despicable implements of man's invention, we have been

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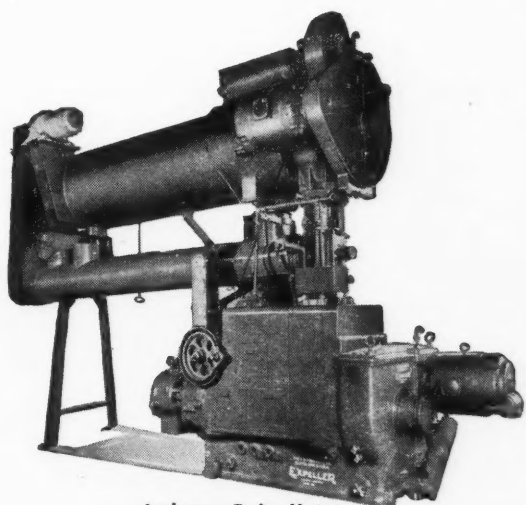
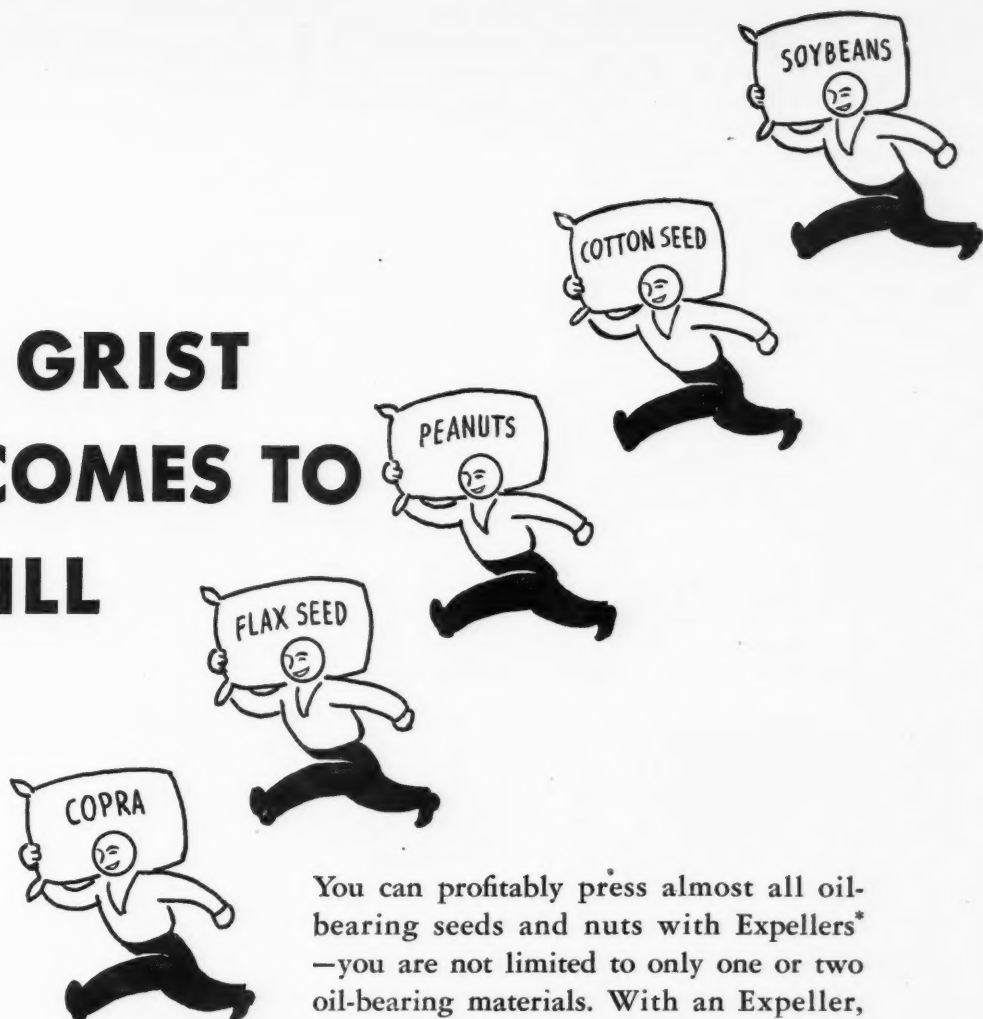
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fighting the distribution of a highly legitimate American product.

As for color, I often wonder if the butter interests don't think they have a God-given right to the color yellow. They smirk to their friends and blat to a dazed and gullible consuming public that oleo should be content to color their product purple or green or some other equally bilious color . . . but not yellow! "Why, indeed," say the butter moguls, "Those unsavory louts are trying to pass off an inferior product on you poor, unsuspecting consumers in the guise of yellow butter." What a laugh that is. Is there no limit to what the consumer must bear in the name of protection for the dairy industry? This same consumer is yearning for the very item from which we work to "protect" him through our devious and un-American means.

EDITOR'S NOTE: Merritt Nash's article must have provoked considerable response among *Western Dairy Journal* readers, for that publication published the following communication from him in a subsequent issue:

I have been noting the torrent of protest that has been directed at the *Western Dairy Journal* since publishing my article regarding oleomargarine and butter. Also, I have been receiving some very pointed criticism in the mailbox and elsewhere. It appears that I am no less than a traitor. Some think I am in the employ of the oleo inter-

ests. The story reached me that I received \$1,000 from the oleo people for writing the article.

My interest in the oleo question is primarily selfish. As a person who gets his entire income from a dairy farm, I felt that I have a right to voice my opinion regarding what I think to be the soundest way in which to improve that field of endeavor and make it more profitable for myself. Butter is our price stabilizer . . . and I object to exactly that. It stabilizes our prices at levels which are generally most unprofitable. Why do we not select a dairy product that will reflect a more advantageous stabilizing effect? Why don't we marshal our forces and launch a great campaign to sell fluid milk, for example, in the manner in which the Coca Cola, the Pepsi Cola, the beer, the liquor, the sparkling waters and the ginger ales, etc., people sell their products in such tremendous quantities? We do not need to depend upon butter to stabilize our dairy product prices. I am one farmer who strongly objects to this time-honored imposition under which we labor . . . this idea that we must go to market and ask the other fellow what we can get for our article. Being in this position we have always been the last to get a price raise and the first to get a price cut. Butter has been a very poor price stabilizer, I can tell you that.

It is most unwise to stick longer with a product for a price stabilizer that has devel-

oped such a likely substitute and replacement as butter has in this product oleo. It is time that we got as our price stabilizer a product which is subject to as little duplication and competition as is possible to select. There is no better item than fluid milk for this purpose, especially if we use some real merchandising in presenting it to the American consumer. Butter is as antiquated as a price stabilizer in the dairy industry as is the "surrey with the fringe on top" in the automobile industry.

### Ancestor Worship

Let me emphasize again that I am interested in the dairy industry to the extent of my entire life's saving. I am not just trying to pick a fight. I am after support in promoting the greatest and most beneficial industry known to human-kind in this troubled world today. But I am impatient with those who want to do it the same way their grandpappys did it. I want results while I am yet here and able to enjoy the fruits thereof. We cannot get results by plodding along with butter, which as a price stabilizer is a sinking ship if there ever was one.

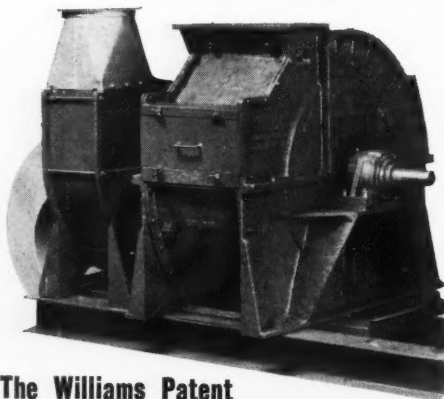
Butter, praise God, will always be with us if we make a good product, but it is not the dairy item upon which we should place our stake in the future. We must relegate it to a position commensurate with its value to us. Business and industry throughout the country regularly employ the use of price leaders, etc., to bring their name and product before the consuming public . . . but only the dairy industry is foolish enough to let such a product act as a price stabilizer for their entire line of products. We are persisting in taking the profit out of our business. I object to this.

Dairy butter is not a practical or economically sound article to force upon the consuming public as the sole source of spread for their bread. During these times when as never before we should be conscious of the great and dire need for conserving the fast dwindling resources of our great nation it seems almost unbelievable that my fellow dairymen, almost to a man, will stand up and fight against the idea of adjusting our thinking and our policies to fit a changing world's requirements.

This is a day of specialization, a day when that individual or that industry or that country which is best suited to the production of a given product should devote their main energies to that line in which they are best equipped to serve their fellowman. This, in the end, will be the most profitable for all. When it comes to the production of fluid milk, the lacteal secretion of the dairy cow, we have been graced by God with one of the most remarkable manufacturing plants imaginable, the dairy cow. Let us promote the tremendous possibilities of this little wonder . . . not by clinging to a by-product such as butter, a fast falling star, but by emphasizing a new and profitable price stabilizer . . . fluid milk.

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## PLAN PRODUCTION OF SOYS IN EAST AFRICA

The Soya Overseas Development Company, Ltd., composed of most of Britain's soya manufacturers, is seeking to stimulate large-scale soybean production in Kenya and Uganda, East Africa, reports USDA's Office of Foreign Agricultural Relations.

Special seed is to be obtained from the United States to further the program, and plans are to experiment with cultivation at an altitude of 7,000 feet or more, where rainfall is at least 25 to 30 inches. The Company has expressed the hope that East Africa will produce 100,000 tons of soybeans within the next 3 years, and has offered to pay growers a guaranteed minimum price in 1948, or the United States market price in sterling on the day of the sale, whichever is higher.

Advocates of the soybean project say it would create a valuable East African export trade, and ease Britain's tight fats and oils situation, and that if soya flour can be introduced into local diets, it will greatly increase the economic efficiency of the East African natives. On the other hand, however, it has been pointed out that soybeans have not done particularly well so far in Kenya, although production has been satisfactory in some parts of Uganda, and that soybeans might displace some crop equally important to the local economy.

A British program calling for the clearing of 3,210,000 acres for production of peanuts to relieve the fats and oils shortage began last year in East Africa, but has been hampered by difficulty in obtaining delivery of tractors and farm machinery, and other factors.

—s b d—

## COSTS IN ILLINOIS

Cost of producing an acre of soybeans in Champaign and Piatt Counties, Ill., in 1946 was \$23.68 or 95.7 cents a bushel, reports R. H. Wilcox in *Illinois Farm Economics*. Average per-acre income from soybeans in these two counties was \$57.05, compared with \$93.21 for corn, \$38.61 for oats, \$71.44 for alfalfa hay, and \$30.47 for clover hay.

The operating expenses incurred in producing an acre of soybeans were the highest of any year following the depression in 1933, reports the publication.

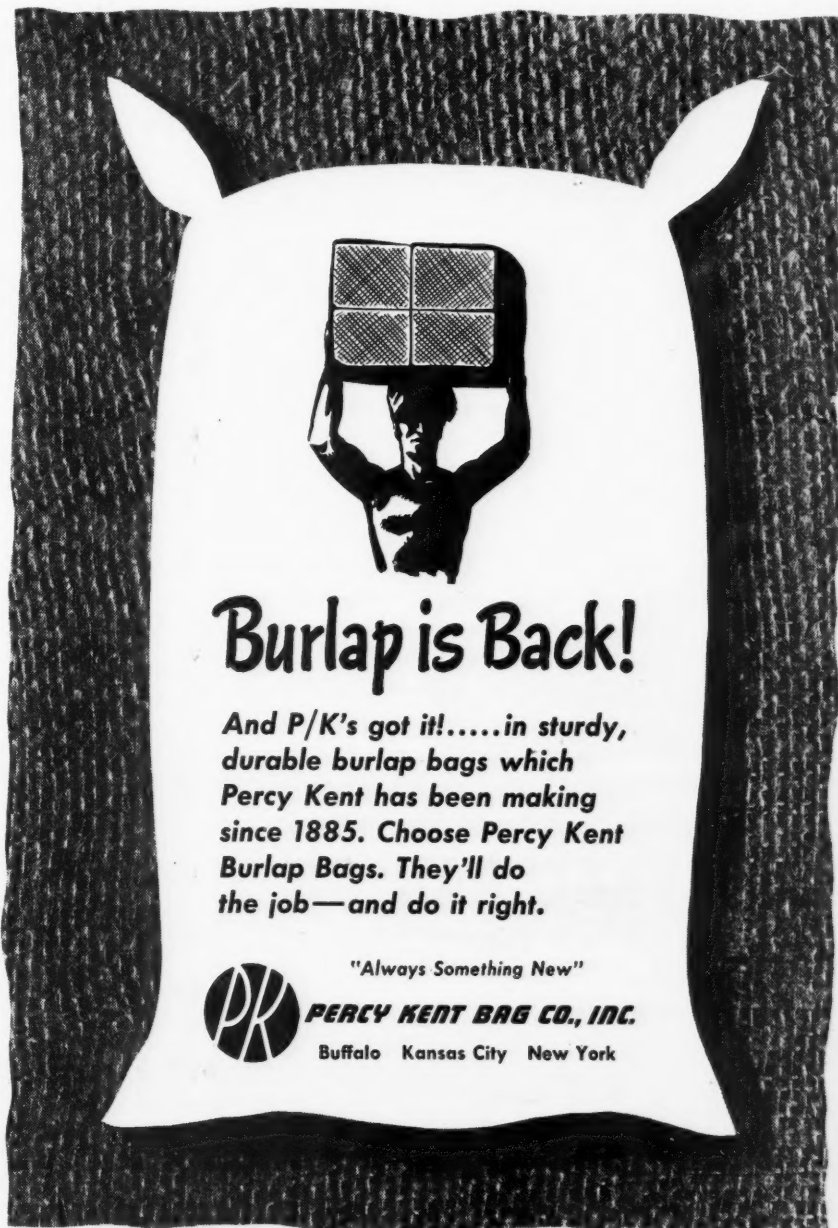
The acre-yield of soybeans in Champaign and Piatt Counties has been gradually declining. The yield per acre in 1946 was 24.7 bushels, and for the years 1944-46, 24.2 bushels, compared with 30 bushels as the average of the three years 1937-39.

The net operating expenses in producing an acre of soybeans in 1946 were \$16.75. When interest at 5 percent on the estimated value of an acre of land, on which soybeans were grown, was added to net operating expenses, it meant a net acre cost of \$23.68. Dividing this figure by the yield in 1946 gave an average cost of 95.5 cents a bushel.

Three-fourths of the men in the Illinois cost work owned their own combines.

## Cost of Producing Corn and Soybeans in 1946 in Champaign and Piatt Counties, Ill.

	Corn	Soybeans
Acres in crop per farm .....	101.1	83.3
Yield per acre, bu. ....	76.1	24.7
Labor and power per acre		
Man hours .....	6.97	4.60
Horse hours .....	.56	...
Tractor hours .....	5.44	3.18
Truck miles .....	.50	1.90
<b>COST ITEMS PER ACRE</b>		
Growing costs		
Man labor .....	\$ 2.86	\$ 2.37
Horse labor .....	.03	...
Tractor use .....	2.40	1.89
Machinery .....	1.08	.97
Seed .....	1.23	3.37
Manure and fertilizer .....	2.05	1.19
General overhead .....	3.20	2.14
Total growing cost .....	\$12.85	\$11.93
Harvesting costs		
Man labor .....	\$ 1.91	\$ 1.01
Horse labor .....	.22	...
Tractor use .....	1.45	.46
Picker and pick-up baler .....	1.50	...
Combine .....	...	1.76
Machinery and truck use .....	.03	.16
Total harvesting cost .....	\$ 5.11	\$ 3.39
Cost of growing and harvesting .....	\$17.96	\$15.32
Taxes .....	1.61	1.59
Interest at 5% on land value .....	6.88	6.93
<b>TOTAL COST</b> .....	<b>\$26.45</b>	<b>\$23.84</b>
<b>INCOME PER ACRE</b>		
Grain or seed .....	\$91.78	\$56.89
Pasture .....	1.43	.16
<b>TOTAL INCOME</b> .....	<b>\$93.21</b>	<b>\$57.05</b>
<b>NET COST PER BUSHEL OR TON</b> .....	<b>\$ .329</b>	<b>\$ .957</b>



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## MINNESOTA TO HOLD SOYBEAN INSTITUTE

Recognizing the growing importance of the soybean industry in Minnesota, the University of Minnesota department of agricultural short courses has scheduled the state's first Soybean Institute. The Institute will be held at University Farm, St. Paul, March 4 and 5, according to J. O. Christianson, director of agricultural short courses.

The course is designed to meet the needs of everyone connected with the soybean industry in Minnesota, from the farmer who grows the beans, to the final manufacturer of finished soybean products.

"Minnesota's soybean industry has now established itself as an important part of the state's agriculture," says J. W. Lambert, assistant professor of agronomy, chairman of the committee on arrangements. "Minnesota now ranks fourth in soybean production, with approximately 1 million acres producing nearly 15 million bushels of beans every year."

The first day of the program will emphasize production of soybeans on the farm. Geo. M. Strayer, secretary of the American Soybean Association, will give the opening address of the conference.

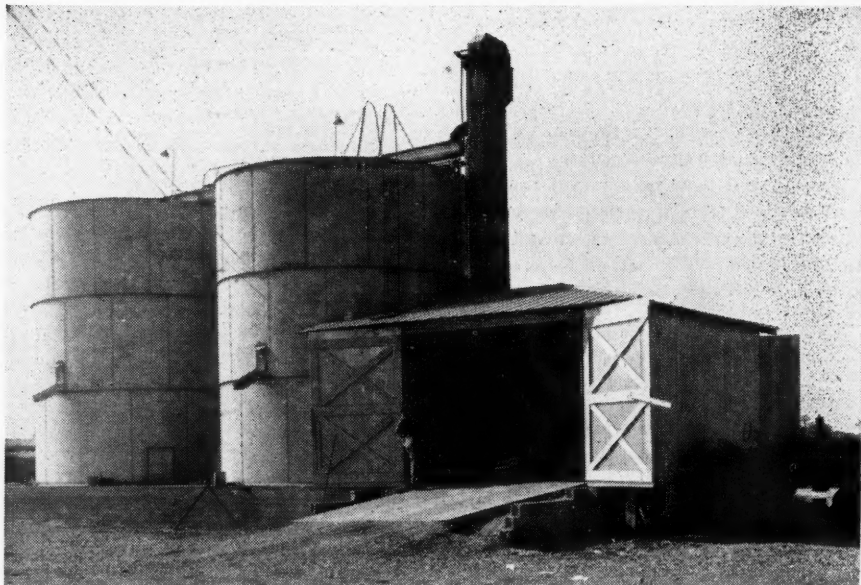
University of Minnesota farm management and soils specialists, agronomists and plant pathologists will discuss growing soybeans in Minnesota at the first session of the course.

Omer W. Herrmann, assistant research administrator with the Research and Marketing Administration, Washington, D. C., will headline the short course banquet, March 4. Herrmann will tell how the provisions of the Hope-Flanagan Act will aid in furthering soybean research on both the state and national level.

Emphasis at the second day of the course will be placed on disease problems, the processors' preferences as to soybeans, orderly marketing and storage problems.

"Soybean research at the Northern Regional Research Laboratory at Peoria" will be explained by G. E. Hilbert, director of the laboratory, at the final afternoon meeting.

## Cotton Gin Stores Soybeans



The Wayside Cotton Gin Co., Morehouse, Mo., has installed twin steel tanks for storage of about 20,000 bushels of soybeans on the gin grounds. Tanks were supplied by the Southern Tank & Boiler Works, the elevating, conveying and transmission equipment by the Reichman-Crosby Co., Memphis. The greatly increased acreage of soybeans in the South has prompted many cotton gins to install storage elevators. The Southern farmer must now bring two crops, soybeans and cotton, to market at about the same time in the fall. The gins become local storage stations and can ship by rail or truck to the processor when desired.

## MULTI-PURPOSE FOOD ON FRIENDSHIP TRAIN

The low-cost Multi-Purpose Food that is 86 percent soy grits, which was first called to the attention of our readers over 2 years ago, is at last attracting wide international attention.

MPF is on shipment to more than a score of foreign countries in Europe and Asia. A box car of half a million meals was on the original Friendship Train when it left Los Angeles for its trans-continental and ocean journey to Europe. Three tons were dispatched to the Vatican to be distributed by the Pope to hungry children. Fifty thousand meals were sent to the starving Navajo Indians recently.

So far 32 relief agencies have distributed more than 5 million MPF meals to hungry people in distress areas.

Cost of this food runs at about 3 cents a

meal. Yet it has approximately the same nutritional value as a meal of beef, green peas, a small potato and milk. It is sold for domestic use in the United States in 10-meal cans weighing 1 1/4 pounds for 30 cents, and in 36-meal cans weighing 4 1/2 pounds for \$1.08.

Numerous national magazines and the feature sections of newspapers have given serious consideration to MPF. Even the usually facetious *New Yorker* magazine devoted nearly a page of its January 17 issue to a serious article on this soybean derivative. The story of how Dr. Henry Borsook of California Institute of Technology developed MPF and of its wide acceptance both alone and as a mix with meat, fish cakes, vegetables and soups. Other publications have featured menus using MPF and stressed the high food value of its soybean content.

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Glidden Co., feed mill division manager, Cecil F. Marsh (center) is shown discussing the Glidden program for 1948 with C. Kenneth Shuman (left) director of nutrition, Dwight P. Joyce, president, Ralph G. Golseth, vice president, H. T. Gordon, administrative assistant to sales, and R. J. Little, general superintendent, at their annual sales meeting in Indianapolis.

## GLIDDEN HOLDS ANNUAL SALES MEETING

Dwight P. Joyce, president of the Glidden Co., was featured speaker at the annual sales meeting of the Glidden Co., feed mill division, held at Indianapolis, December 29 and 30. All the field representatives and district managers attended the 2-day conference which was conducted by Cecil F. Marsh, general manager of the division.

Mr. Joyce discussed the present expansion program in effect in the Indianapolis plant and outlined future plans for the division. He traced the growth of the greater Glidden group in 30 years, from one division manufacturing paints to a nation-wide organization with over 30 divisions producing paints, chemicals, soya products, feeds, foods and refined metals, with sales in 1947 in excess of 185 million dollars.

Ralph G. Golseth, vice president in charge of the Glidden soya division and the feed mill division, also spoke to the group.

C. Kenneth Shuman, director of nutrition, conducted an illustrated discussion on feeding and management, and the 1948 plans for

sales promotion and advertising were announced by Howard T. Gordon, administrative assistant to sales, and G. T. Jones, advertising manager.

Nearly 200 executives and sales representatives of the Durkee Famous Foods Division of the Glidden Co., met in Cleveland recently for a 3-day marketing and merchandising conference.

Described by L. Y. Pulliam, vice president of the Glidden Co. in charge of the Durkee Division, as the largest in Durkee history, the conference was directed by Co-chairman N. B. Betzold, general sales manager of the division, and Elmer L. Weber, sales promotion manager.

Other executives with important parts in the conference were J. Albert Califf, Chicago, general manager, central margarine division; Paul Hursh, general manager of Durkee's eastern operations, and L. F. Betzold, manager of the Norwalk, Ohio, margarine division.

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# Publications

## Foods

**SOYBEANS ARE HERE TO STAY.** By Jeanette B. McCay, *Journal of Home Economics*, December 1947.

Dr. McCay of Ithaca, N. Y., served as chairman of the soybean committee of the New York State Emergency Food Commission during the war. In this article she recalls the "remarkable cooperative program to introduce soybeans to New Yorkers" by the Commission in 1943 when the New York state government held soybeans to be an ace in the hole if disaster should hit the eastern industrial centers. In that case, the Commission felt that soybeans might help to stave off hunger and malnutrition among New York City's 13 million people.

"Sponsored by the agricultural leaders, economists and nutritionists; guided by the State College of Home Economics and the extension service; carried out by the county home bureau agents in collaboration with a staff of state-supported emergency agents and local nutrition committees, the statewide program began.

"Governor Dewey, astute in public affairs, invited leading radio, newspaper and magazine writers to a soybean luncheon. The publicists were impressed and went to work on stories about soybeans. Such was the interest in soybeans that staff members at Cornell University were hard put to answer the hundreds of inquiries that came in — from homemakers, from hotels and restaur-

rants, from the Army and Navy, from farmers, from businessmen, from foreign governments and far corners of the world. In the month of July 1943, 10,000 letters were received."

Disaster did not come and public interest in soybeans declined. Soybeans as such are not used to any great extent in the American diet. But Dr. McCay discusses their growing use in commercially prepared foods.

"It must be remembered that it took 300 years for the potato to be accepted," she points out. "Compared to such slowness in winning approval, the strides made in America by soybeans during the last 20 years are phenomenal. . . . Next to corn and wheat, the soybean is now the most valuable field crop in our food production.

"Any plant which, with one man's labor for a day, will yield food furnishing enough calories to support a person for a year, enough protein to supply a year's needs for five persons, enough calcium for two, and enough thiamine for the yearly requirements of seven individuals—such a plant is bound to 'win friends and influence people'."

**THE VITAMIN CONTENT OF SOYBEANS AND SOYBEAN SPROUTS AS A FUNCTION OF GERMINATION TIME.** By Kit Ngaan Tso Wai, Jean Clark Bishop, Pauline Beery Mack and Robert H. Cotton. *Plant Physiology*, April 1947.

The investigation was made to compare the vitamin content of mature unsprouted

Bansei soybeans with that of the same variety after different periods of sprouting, by a method suitable for yielding an edible product.

The usual practice in oriental countries is to use the hypocotyls and to discard the cotyledons. For this reason, the relative distribution of vitamins was ascertained separately in these portions of the sprouted soybeans after 54 hours of germination.

Assays for carotene, thiamin, riboflavin, niacin, and ascorbic acid were made.

The quantity of all vitamins studied except thiamin showed increases through 54 hours of germination. Thiamin showed alternate increases and decreases throughout the germination period investigated.

In the product of a 54-hour germination period, the cotyledons contained notably greater amounts of all vitamins for which tests were made. The process of sprouting soybeans is thus shown to increase the nutrient value of the product. The entire bean should be eaten, since the cotyledons, which frequently are not retained, are a richer source of the vitamins for which tests are made, than are the hypocotyls.

**SOYA PROTEIN AS A METHOD OF INCREASING THE NUTRITIVE VALUE OF HARD CANDY.** By Gene Sullivan. *Intern. Confectioner*, December 1947.

Discussion of the recent study of the use of isolated soya protein as an ingredient in hard candy by the Southern Regional Research Laboratory at New Orleans.

The author points out that candy is criticized for cutting down the usual intake of other nutritious foods by the growing child. This is because of its ability to curb the appetite for other foods.

He suggests that adding a high quality protein to high-carbohydrate candy would add important nutritive values that would change such candies from unbalanced to balanced foods. He believes this would overcome most of the present objections to candy of this sort by physicians and nutritionists.

Two formulae for the use of soy protein in candy that were tested by the Southern Laboratory are included.

**PRACTICAL APPLICATION OF LECITHIN IN BAKERY PRODUCTS.** Address by F. E. Walrod before American Society of Bakery Engineers, Chicago.

Experiments have been undertaken to determine the effect of lecithin in bread doughs, and thus settle some of the controversy surrounding the use and benefits of lecithin in the baking industry.

These shop tests disclosed that the use of lecithin reduced mixing time and yielded an increase in absorption due to its emulsifying action. It produced drier doughs that required less dusting flour, and insured against bulkiness regardless of the flour used.

Lecithin-containing doughs had greater elasticity and smoothness, comparable to the effect obtained by increased shortening.

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The crumb texture was more uniform and finer, and the loaves were more uniform in shape.

The use of lecithin delayed staling by enhancing the value of the shortening used. Through its emulsifying action, it produced more uniform and evenly textured bread. Further delay in staling was produced by the formation of a lecithin-protein complex with good water-retaining properties, and by increasing the water-proofing properties of the film of fat covering the starch and gluten network of the crumb.

## Feeding

**SOYBEAN OIL MEAL AIDS ROUGHAGE DIGESTION IN BEEF CATTLE.** By Wise Burroughs and Paul Gerlaugh. *Farm Science and Practice*. 64th Annual Report Ohio Agricultural Experiment Station, Wooster, Ohio.

Soybean oil meal, when added to a corn-hay fattening ration for steers, appears to actually aid the digestion of the roughage consumed. In two digestion trials, a basal ration was fed consisting of a liberal quantity of corn-and-cob meal, a limited amount of timothy hay and a small quantity of soybean oil meal (0.5 pound per steer per day). The addition of 2 pounds of soybean oil meal to this basal ration resulted in a 20 percent increase in the digestibility of both the hay and cob fractions of the ration.

The merit of adding protein concentrates to Cornbelt fattening rations for cattle has long been known; however, a full understanding of why protein concentrates are so beneficial is not fully recognized. Presumably, the proteins in cattle rations are used not only for maintenance, growth, and fattening in the steer's body proper but also they are used by microorganisms living within the digestive tract which in turn aid in roughage digestion.

The possibility exists that protein concentrates, such as soybean oil meal, exert other beneficial influences upon the general nutrition of cattle which heretofore have been considered entirely as benefits from the feeding of a balanced ration.

**VALUE OF SOYBEAN MEAL PREPARED FROM FROSTED-FIELD DAMAGED SOYBEANS FOR GROWING-FATTENING SWINE.** By B. W. Fairbanks, J. L. Krider, Damon Catron, and W. E. Carroll, Illinois Agricultural Experiment Station. *Journal of Agricultural Research*, 1947.

In the central Cornbelt large areas of soybeans of the 1942 crop were frosted before maturity and were further damaged by unfavorable weather which prevented harvest until the spring of 1943. Some of these frosted-field-damaged soybeans were described as sample grade mixed soybeans, 40% damaged, with a test weight of 48

lbs. per bushel. Soybean oil meal prepared by the expeller process from these damaged soybeans was compared with a soybean oil meal prepared by the same method, from sound soybeans in feeding experiments with growing-fattening pigs.

In three pairs of pigs, the checkmates made more economical gains than the pigs fed the soybean meal from frosted-field-damaged soybeans, while in five pairs the economy of gains favored the latter pigs. The differences were found to be statistically insignificant.

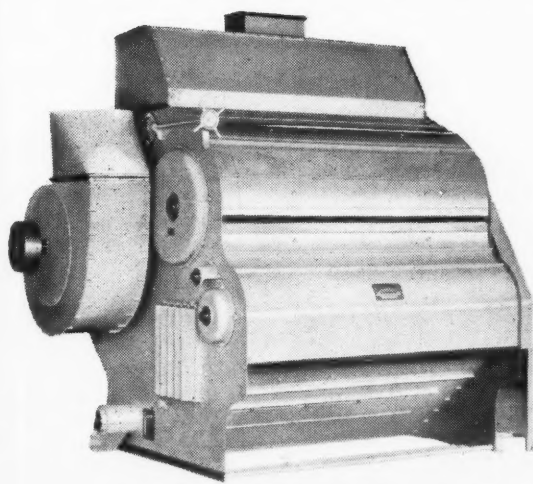
It was concluded that the energy value of the two oil meals is the same for growing-fattening pigs; and at the protein levels fed the two oil meals were equally efficient in supplementing corn, alfalfa meal and minerals.

**VITAMIN A DEFICIENCY IN DAIRY CATTLE ON RATIONS CONTAINING GROUND RAW SOYBEANS.** By J. C. Shaw, Maryland Agricultural Experiment Station, and L. A. Moore and J. F. Sykes, Bureau of Dairy Industry, U. S. Department of Agriculture. *Journal of Dairy Science*, Aug. 1947.

Feeding experiment with cows up to and after calving. Diet consisted of a low-carotene timothy hay and a concentrate containing 40% ground raw soybeans, with and without vitamin A concentrate supplementation.

# HOW CAN THIS MACHINE SERVE YOU?

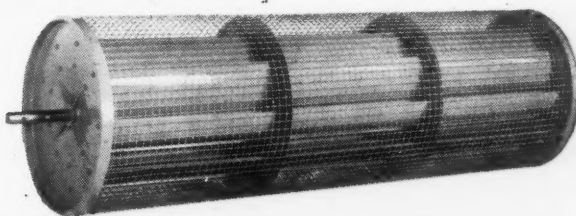
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The Carter Scalperator is becoming more and more popular in the soy bean field. The machine is applied to the initial cleaning of soy beans at relatively high capacity to remove coarse and light foreign materials. The Scalperator provides an efficient aspiration on beans going directly to storage. Specially designed controls coordinate volume of beans going through the Scalperator with volume required for drying. It is valuable as a cold-blasting unit on beans following the dryers. Machines come in sizes to fit a variety of capacity needs. Compact, all-metal, all-enclosed, takes little power. Write for details today.



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# GRITS and FLAKES...

FROM THE WORLD OF SOY

The Boone Valley Cooperative Association, Eagle Grove, Iowa, has bought the Hubbard Soybean Mill, Inc., Hubbard, Iowa, effective January 1. Ed Olson, Eagle Grove, is the new manager of the two-exPELLER plant, succeeding Lee Hershberger.

\* \* \* \*

Frank J. Slepicka, formerly associated with *American Miller & Processor* and later with *Grain Magazine*, has joined the staff of J. C. Kintz Co., Cedar Rapids, Iowa. The firm is augmenting its organization to better serve the grain trade.

\* \* \* \*

Two recent publications by Jeffrey Manufacturing Co., Columbus, Ohio, are *An Investment in Research Development for the Future*, a folder descriptive of the new Jeffrey research center, and *What We Make*, 36 pages listing and describing Jeffrey products. The firm and its products serve 50 industries, according to the latter booklet.

\* \* \* \*

A picture-story about Wm. J. Morse, principal agronomist of the Bureau of Plant Industry, Beltsville, Md., and his work with soybeans was included in the "Interesting People" section of the February issue of *AMERICAN MAGAZINE*.

\* \* \* \*

A lunch dish in the cafeteria of City College of New York recently was "Multi-Purpose Food," a low cost completely balanced food processed from soy products. The food is being shipped by relief agencies to hunger areas in Europe.

\* \* \* \*

Walter F. Platt, Jr., has been named assistant vice president in charge of eastern sales for Archer-Daniels-Midland Co., Minneapolis. His headquarters will be in Philadelphia. Mr. Platt entered the linseed oil industry in 1915, became associated with ADM in 1928.

\* \* \* \*

Fast, dependable inter-floor transportation with the Nordyke service elevator for a variety of industries is described in a new bulletin released by the Allis-Chalmers Mfg. Co., Milwaukee, Wis. The elevator can be used in any building up to 200 feet high.

\* \* \* \*

Robert Highley was appointed manager of the New York general sales division of Bemis Bro. Bag Co., effective January 1.

\* \* \* \*

Hugh Comer, Alabama cotton manufacturer, has been elected to the board of directors of Allis-Chalmers Mfg. Co., Milwaukee, Wis. W. A. Roberts and W. C. Johnson, executive vice presidents, were also elected to the firm's board of directors.

\* \* \* \*

H. Merrill Bowman has been appointed assistant divisional sales manager for power transmission equipment for Link-Belt Co., with headquarters in the firm's Pershing Road plant in Chicago. Eugene S. Bogart succeeds Bowman as district sales manager in Link-Belt's Baltimore office.

\* \* \* \*

Earl M. Dean, Mason City, Iowa, was reelected president of the North Iowa Cooperative Processing Association, at the annual meeting in Mason City in December. Martin Fabricius was reelected vice president. The association, which is owned by 31 member elevators, processed 500,000 bushels of soybeans during the past year, according to Manager Glenn Pogeler.

\* \* \* \*

Richard F. Uhlmann was elected president of the Chicago Board of Trade January 12. He has been a member of the board 27 years, a vice president 5.

\* \* \* \*

Recent newspaper pictures featured the relief feeding of Navajo Indians with Multi-Purpose Food, which includes soy products. The Navajos have been reported to be facing starvation on their reservation.

\* \* \* \*

Blaw-Knox Co., Pittsburgh, has been appointed by Emery Industries, Inc., as exclusive licensing agent in Great Britain for the continuous fat splitting process covered by Proctor & Gamble Co. and Emery Industries.

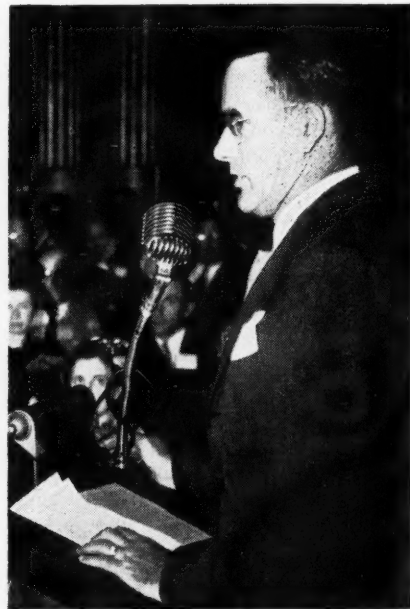
\* \* \* \*

"Soybean Research Aids Industry," was an article by Herbert Fredman in the December issue of *Commerce Magazine*. The article was devoted to the soybean work at the Northern Regional Research Laboratory, Peoria, Ill.

\* \* \* \*

Big Four Cooperative Processing Association, Sheldon, Iowa, processed 600,000 bushels

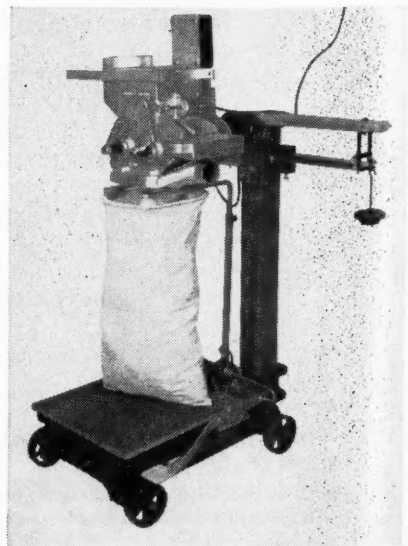
## OHIO STATION DIRECTOR



L. L. Rummell, dean of the College of Agriculture at Ohio State University since last September, became director of the Ohio Agricultural Experiment Station January 1. He thus becomes the first man to act as both dean of the college and director of the Station since the Station was established 50 years ago. The Ohio station now has a scientific research staff of about 150, a main farm of over 1,200 acres at Wooster and 16 other small farms scattered throughout the state.

— s b d —

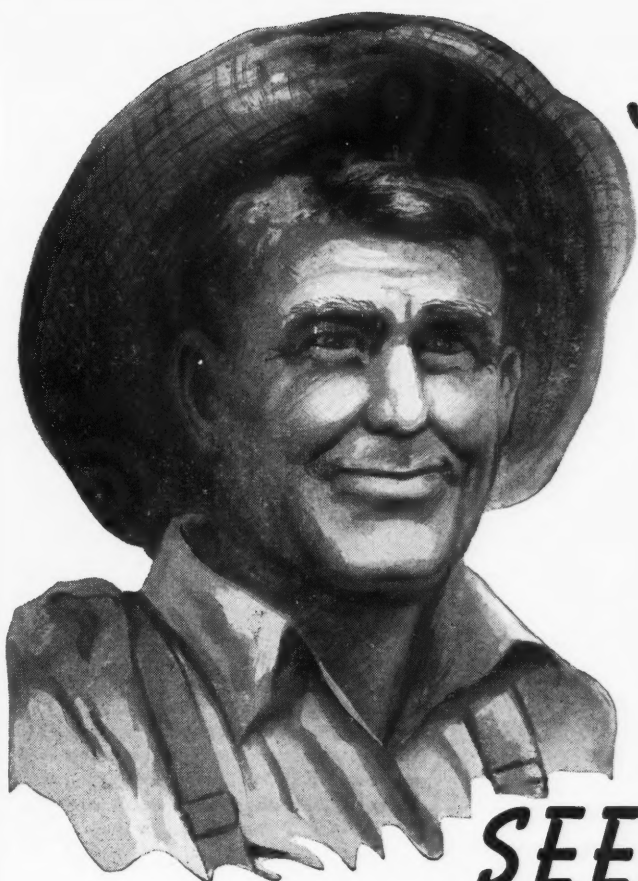
## NEW BURROWS ITEM



The Burrows automatic electric bagging device is a new addition to the line of equipment of the Burrows Equipment Co., 1316 Sherman Ave., Evanston, Ill. It can be used for filling all sizes of bags with any free-flowing, non-abrasive material which does not require vibrating.

SOYBEAN DIGEST





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Goggles, Rubber  
Huller, Sample Seed  
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Mangelsdorf Germinator  
Mixers, Seed  
Moisture Testers  
Ovens  
Pads, Indented Test  
Pans, Sample  
Platform Scales  
Poultry Time Switch  
Rat Poison  
Respirators  
Rust-Oleum Paint  
Sample Pans  
Scales  
Scoops  
Seed Cleaners  
Seed Scales  
Sho-Gro Germinator  
Sieves, Dodder  
Sieves, Grain Dockage  
Soil Test Kits  
Spout, Seed Pouring  
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Triers  
Wheat Tester

of soybeans last year, Manager Chas. W. Hanson announced at the annual meeting in December. Edward Dobbertin, Paullina, Iowa, was reelected president; Doores Waandes, Hull, Iowa, vice president; and L. M. Penning, Ashton, Iowa, secretary-treasurer.

\* \* \* \*

Stearns Magnetic Mfg. Co., Milwaukee, announces changes in personnel with the appointment of Herbert L. Piasecki, office manager, to the position of assistant treasurer. A. B. Paape has been made assistant secretary.

\* \* \* \*

James M. White, vice president in charge of manufacturing at Allis-Chalmers Mfg. Co., Milwaukee, Wis., announced his resignation effective January 17, but will remain in an advisory capacity to President Walter Geist for 6 months. Manufacturing operations will continue under the direction of Fred S. Mackey.

\* \* \* \*

*Duane L. Norby, Toledo manager Cargill, Inc., was recently reelected for his second term as president of the Toledo Board of Trade.*

\* \* \* \*

Whitney Eastman, president of the Chemical division, General Mills, Inc., was reelected president of the Minneapolis Area Council of the Boy Scouts of America at its annual business meeting January 13.

\* \* \* \*

In anticipation of increased demand for its concentrates Janesville Mills, Inc., Janesville, Wis., has made tentative plans for an addition to the new processing plant erected 3 years ago.

\* \* \* \*

William B. Bosworth has been elected secretary of the Chicago Board of Trade. He came to the board in 1930 as assistant secretary and was named acting secretary in August, 1947.

\* \* \* \*

*Arthur A. Williams, buyer for Happy Feed Mills, was chosen president of the Memphis Merchants Exchange, Memphis, Tenn., at the 66th annual election.*

\* \* \* \*

Bradford H. Stetson, superintendent of the Minneapolis bag factory, Bemis Bro. Bag Co. since 1937, has been advanced to the company's general production department in St. Louis as office assistant. He took up his new duties January 2.

\* \* \* \*

Robert H. Fuller, who supervised construction of many of the larger air bases in Central and South America, has joined the H. K. Ferguson Co., industrial engineers and builders, as a contract engineer in the Eastern district.

\* \* \* \*

*Results of the Cooperative Uniform Soybean Tests, 1946, Part II, Southern States, has been issued by Bureau of Plant Industry, Beltsville, Md.*

\* \* \* \*

The Mankato Processing Co. announces that the name of the firm has been changed as of February 1 and is now Mankato Honeymead Co., Mankato, Minn. Management remains the same. C. F. Marshall is president, L. W. Andreas is vice president-secretary.

\* \* \* \*

F. B. Jewett, Jr., formerly vice president of the National Research Corp., Boston, Mass., has been named director of business administration for the research laboratories of General Mills, Inc., Minneapolis, Minn.



St. Regis Paper Co. announces the appointment of Arch Carswell to the newly established position of general sales manager of the company's Multiwall bag division. He will make his headquarters at the New York office. H. W. Sloan succeeds Carswell as Pacific coast manager of the division.

— s b d —

## BORDEN CHANGES

Research and development in soybean chemistry for the entire Borden Co. soybean division will be carried on in Waterloo, Iowa, beginning January 21, it is announced by C. E. Butler, president of the soybean division.

The laboratory and research staff on soybean products will be transferred from New York City to Waterloo.

New personnel to go to Waterloo include Dr. H. N. Brocklesby, former coordinator of research for Borden and present director of research and technical work for the soybean division; and Dr. Murray Murdock and John Coblur, Elgin, Ill., research chemists.

George Rolland and Joseph Musser, former chemists in the Waterloo control laboratory, will join the staff of researchers.

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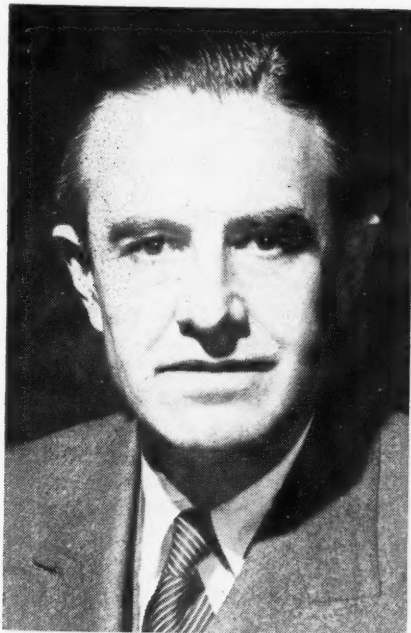
Front at Beale, Memphis, Tenn.

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## CABINET MEMBER A MARGARINE EATER



SECRETARY HARRIMAN

Secretary of Commerce William Averell Harriman, a member of one of America's richest families, eats margarine instead of butter "and likes it," reports *Washington (D. C.) Post*.

"I'm ready to commend margarine to the American consumer," he said. "I've eaten it since the war. I can't tell the difference from butter. It's very satisfactory."

Harriman's remarks at the White House news conference, followed an expression that he was "surprised that people pay \$1 a pound for butter."

Margarine has been selling in Washington at 37 and 41 cents a pound.

— s b d —

## A-C HEAD PASSES

Stewart E. Tray, 43, manager of the chemical processing machinery section of the Allis-Chalmers basic industries department, died January 17 at his home in Milwaukee.

Holder of chemical engineering and doctor of engineering degrees from Rensselaer Polytechnic Institute, and a master's degree in mechanical engineering from the University of Michigan, Dr. Tray entered the employ of Allis-Chalmers in 1932. He was associated with the firm's water conditioning department and engineering development division before becoming connected with the chemical processing section. In 1943, on leave from Allis-Chalmers, he served as an assistant in the government's development of the atomic bomb.

Previous to joining Allis-Chalmers, Dr. Tray was employed successively by the Consumers Power Co., Battle Creek, Mich.; the Commonwealth & Southern Corp., Jackson, Mich.; and Sargent & Lundy Co., Chicago.

character, the professional insider, that it? Here you agreed on a set price for

### A Question of Right—Public and Private

If it is true that "Administration insiders" profited from their knowledge of the government's buying program by speculating in the wheat market, they have violated a public trust and shown themselves unworthy of office.

That much is clear. But it is also clear that in the investigation of this alleged scandal, thousands of honest American citizens have been unfairly subjected to unwarranted public abuse. Publication of their names would seem to infringe rights guaranteed them as free American citizens.

It is true that such publication by the Department of Agriculture was authorized by a special Act of Congress on December 19 which revoked a provision of the Commodity Exchange Act, specifically assuring them of anonymity. Hence, the action may have been technically legal. It was nonetheless morally wrong.

As risk-takers or speculators, these individuals were performing a valuable function in our economy. Their transactions were wholly legitimate, specifically sanctioned by law. They are deserving of our commendation, not criticism or condemnation.

THIS IS AN EXCERPT from a full-page newspaper advertisement in which we undertook to explain as simply and as factually as possible how the commodity exchanges operate—what the speculator does that helps cut business risks, business costs, and ultimately consumer prices.

Public understanding is vital, because unjustified attacks on commodity speculation threaten to hamstring the operation of free commodity markets, on which our system of distribution depends.

In brief the facts are these: The Government forced the grain exchanges to double margin requirements for speculative accounts on the mistaken theory that this would reduce prices. *Instead wheat prices continued to rise*, for the simple reason that the price of wheat, like any other commodity, is dictated solely by the relationship of supply and demand. World-wide shortage of commodities was never greater. That fact—and that fact alone—accounts for higher prices.

The full story makes the situation much clearer. It's an important story—important to you. If you would like to know it, we will be glad to send you a reprint of our advertisement in booklet form. Just ask for our report on how commodity markets work.

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# WASHINGTON



# Digest

## Beans for Crushing

Combined Department of Agriculture and industry estimates put the supply of soybeans available for crushing during the year beginning last Oct. 1 at 149,379,000 bushels.

At the estimated yield of 9 pounds of oil per bushel, this would make at total crush of 1,344,400,000 pounds of oil. Out of the total soybean supply, it would leave 5.3 million bushels for carryover, and allow 28 million bushels for seed, feed, food and waste.

Here are the official estimates of soybean oil production starting January, 1947, and projected through next June.

	Million pounds
Jan.-March, 1947 (census) .....	437.9
April-June, 1947 (census) .....	399.7
July-Sept., 1947 (census) .....	322.0
Oct.-Dec., 1947 (estimated) .....	375.0
Total calendar year .....	1,534.6
Jan.-March, 1948 (estimated) ...	425.0
April-June, 1948 (estimated) ....	325.0

Total July 1, '47-July 1, '48...1,447.0

Over 141 million bushels of soybeans were stored in all positions on January 1, Bureau of Agricultural Economics reports. These stocks are 9 percent less than a year ago and the smallest in 6 years for which comparable data are available.

Of the current total, nearly 49 million bushels were at processing plants, 13 million bushels at terminals, 28½ million bushels were in interior mills, elevators and warehouses, and nearly 51 million bushels remained on farms.

## Taxes on Margarine

Backers of legislation to repeal Federal taxes on margarine report more congressional interest in repeal measures this year than at any time in the long history of the industry's efforts to remove the tax curbs.

This is also indicated by talks with members of the House and Senate Agriculture committees. One House committee member

from the South says that a switch of four Republican votes in the committee would obtain a favorable report on a repeal bill.

This member also feels that if the House should report out a bill, it would pass both House and Senate.

About a dozen bills to repeal Federal taxes on margarine — some of them complete repealers; others only partial—have been introduced in both Houses, by both Republicans and Democrats.

The main reason for sharpened interest in margarine tax repeal is the high cost of living in general and the high cost of butter in particular. However, efforts of the northern soybean industry are also credited with broadening support for repeal legislation.

## Copra Exports

Department of Agriculture officials expect a drop in exports of Philippine copra and coconut oil of about 10 percent this year compared with the record-high shipments during 1947.

The decrease is expected mainly because of typhoon damage, to increased production of desiccated coconut, and to smaller stocks on hand than a year ago.

Last year's exports of copra and coconut oil (in terms of copra) totalled 1,003,488 long tons. Last year's shipments exceeded those of 1946 by 67 percent, and were 80 percent larger than the pre-war average (1935-39).

Around 60 percent of the exports went to the United States; about 30 percent to European countries. Production for the year was estimated at 1.1 million tons, a record high.

## Walsh Promoted

Robert M. Walsh, fats and oils expert of the Bureau of Agricultural Economics, is the new assistant director of the Fats and Oils Branch of Production and Marketing Administration.

## By PORTER M. HEDGE

Washington Correspondent for  
The Soybean Digest

Walsh has stepped into the post left vacant by George L. Prichard when he became director of the branch last fall. Walsh is a veteran of 14 years' work with BAE, and is a recognized heavyweight among USDA officials in the fats and oils field.

One of his hopes is to push development of a research program for soybeans and other fats and oils under the new agricultural marketing and research program.

## Controls on Feeds?

Experts at sampling congressional sentiment doubt that Congress will approve legislation to authorize compulsory controls on the mixed feed industry in order to conserve grains and feeds for export.

There is considerable question whether the Administration will push very hard for compulsory limitations on feeds. About all USDA has had in mind that would affect soybean meal is a 60 day limitation on inventories.

At their recent meeting with USDA officials, representatives of the feed industry disapproved of any government program that might restore compulsory controls.

## Edible Oils Allocated

Nearly 15 million pounds of margarine, shortening, and other edible oils have been allocated for export from the U. S. during the first quarter of 1948 through March. Here is the breakdown in millions of pounds, fat content:

Lard, 34.5; margarine 2.2; shortening and other edible oils, 12.7; soap, 6.0; linseed oil, 0.3; other industrial oils, 8.1; shelled peanuts for interim aid, 23.2. Total for the first quarter 87 million pounds.

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## REPORTS REGIONAL LAB INVESTIGATIONS

Recent results of chemical investigations in the four Regional Research Laboratories and other units of the Bureau of Agricultural and Industrial Chemistry of the U. S. Department of Agriculture, are described by Dr. Louis B. Howard, chief of the Bureau, in his 1947 annual report.

New discoveries for the year and new scientific and industrial developments based on previous work are briefly described under 64 informative headings. Additional information is given in the year's 289 publications and 27 public service patents which are listed in a mimeographed circular.

The processing and preservation of fats and oils for food uses and the conversion of such materials into industrial nonfood products were advanced by research in three of the regional laboratories.

A new industrial application was made of soybean protein as an adhesive in the manufacture of casings for shot-gun shells. Methods were developed for obtaining improved peanut meal and peanut protein suitable for the manufacture of synthetic fibers and for use as an adhesive in paper coatings and cold water paint. A continuous process was developed for making casein bristles, and improvements were made in casein textile fibers.

— s b d —

## INDIAN OILSEEDS

Realizing the importance of vegetable oilseeds and oils in the domestic economy and foreign trade of India, the new government, on October 16 inaugurated the "Indian Oilseed Committee" to investigate the problems of marketing, prices, and transportation both within and outside of the country, as well

as long-range production and development programs, reports *Foreign Crops and Markets*.

One of the major functions of the committee is to determine whether India should endeavor to increase domestic utilization of oilseeds by expanding the crushing industry and exporting the surplus oil, or revert to the pattern of prewar economy under which oilseeds were an important export item.

India is one of the world's largest producers of oilseeds, ranking first in peanut

production, second in rapeseed, sesame seed, and castor beans. In prewar years this country ranked second only to Argentina in flaxseed exports and second to Brazil as a castor-bean exporter. In 1938, which was considered a normal year, vegetable oilseeds, oil, and oil cake represented 12 percent of the total value of exports. In view of the world shortage of fats and oils and India's need for foreign exchange for essential imports it may be found advisable to permit the exports of oilseeds for at least a few years.

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There's three things soybean processors must have in addition to the right extraction solvent —

- A Dependable Source of Supply
- Assured Uniformity
- Laboratory Quality Control

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## SOY PRODUCT



This Ben Gee Mealless Chop Suey dinner shown above is a complete meal for four people. It includes tea and soy sauce, packed in a distinctive package. The vegetables are chock full of minerals and vitamins and the Chow Mein Noodles with 5 percent egg solids furnish protein. Independent and chain stores throughout the country feature Ben Gee Chop Suey Dinner, which is prepared by Ben-Gee Products, Inc., Oak Lawn, Ill.

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**and OIL**

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**verted into good**  
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## *Market Street*

We invite the readers of **THE SOYBEAN DIGEST** to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue.  
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**SITUATIONS VACANT** — Two fully qualified and experienced chemical engineers required, each to run one shift of a 150 tons a day Allis-Chalmers solvent extraction plant on soya beans in England, commencing first September 1948. Previous experience in solvent plant essential. Excellent salary. Write full details, to FS, care Soybean Digest, Hudson, Iowa.

**AODA**—Vegetable soybean seed. Choicest quality seed stock. Soybean Johnson, 1244 S. 4th St., Louisville 3, Ky.

## **SEED DIRECTORY**

A charge of \$2.00 will be made to subscribers for listing in the March and April issues. Quantity for sale and variety are included.

### **ARKANSAS**

**Burdette** — Burdette Plantation, 2,000 bu. certified improved Arksoy and certified Burdette 19.

**Scott** — Robert L. Dortch Seed Farms, 1,500 bu. certified Dortchsoy 2; 1,500 bu. certified Dortchsoy 7; 500 bu. certified Dortchsoy 31.

### **ILLINOIS**

**Laura** — F. M. Oakes, 800 bu. uncertified Lincoln.

**Ursa** — Frank W. Lewis, 2,000 bu. certified Lincoln.

### **INDIANA**

**De Matte** — Carl L. Fritzt, 1,000 bu. certified Lincoln.

**Windfall** — Mitchell Farms, 1,000 bu. certified Earlyana; 5,000 bu. certified Lincoln.

### **KANSAS**

**Burlington** — James L. Cochran, Rt. 4, 350 bu. Chief, eligible to be certified.

### **KENTUCKY**

**Louisville** — E. F. (Soybean) Johnson, 1244 S. 4th St., Aoda, 99.9% pure, 97% germination.

— s b d —

## **PLANT TO PHILIPPINES**

The single expeller soybean oil mill operated at Windfall, Ind., for 9 years by Mitchell Partnership and Elevators & Mills, Inc., has been dismantled and the processing machinery sold to Union Confectionery Machinery Co. of New York and Chicago. The principal machines were shipped to the Philippine Islands for use in crushing copra, the firm announces.

Mr. June S. Mitchell, who was president and manager of Elevators & Mills, Inc., is executive partner of Mitchell Farms which has added the vacated plant facilities to its existing facilities for processing hybrid seed corn and certified soybeans, oats and wheat.



# BEMIS

## Headquarters for All Types of Bags for the SOYBEAN INDUSTRY



### MULTIWALL PAPER SHIPPING SACKS

Tough, sift-proof. Will withstand rough handling. Quality construction throughout all manufacturing operations.



### WATERPROOF LAMINATED TEXTILE BAGS

Tear-resistant, puncture-resistant, siftproof, moistureproof. Ideal for products needing extra protection.



### COTTON BAGS

Made by expert workmen from quality cloth. Especially favored because of the high salvage value of the bags.



### BURLAP BAGS

Select burlap sewn with quality thread in Bemis close-stitch for seams that are stronger than the burlap itself.

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## WOODSON-TENENT LABORATORIES MEMPHIS, TENN.

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**SPECIALIZING IN ANALYSES OF SOYBEANS--OILS--MEALS**

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**"OVER 500 MILLION DOLLARS WORTH OF PRODUCTS ANALYZED SINCE 1935"**



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**JUTE**

Carting Jute  
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**BURLAP  
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Fulton Bag & Cotton Mills import Burlap direct from selected mills in India. Sturdy, well printed Fulton Quality Burlap Bags are made to stand up under rough handling. Fulton Bag & Cotton Mills can supply you with Quality Burlap Bags quickly and economically from the bag factory nearest you. Remember, meal heats less when stored in textile bags. Write to our plant nearest you for prices.

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*Manufacturers Since 1870*

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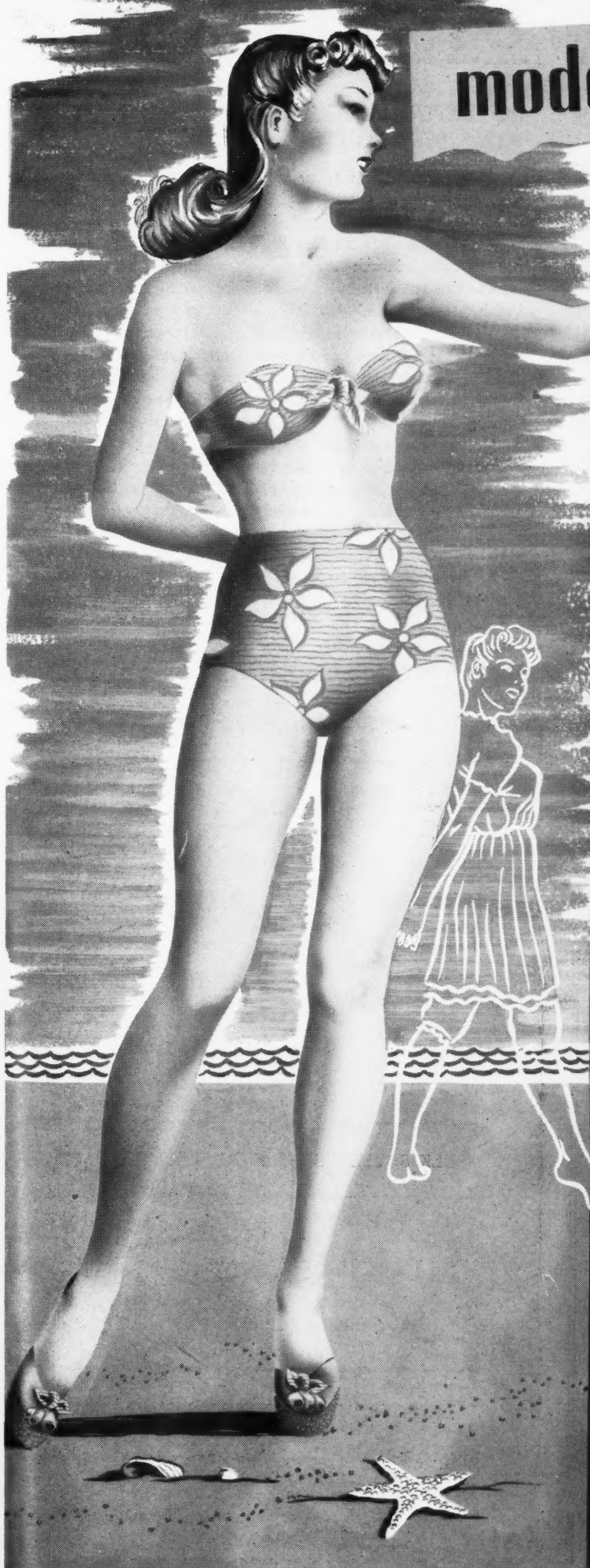
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modern *Figures are best*

150 to 156 F.



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### PHILLIPS NORMAL HEXANE OFFERS YOU

- High purity
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Phillips Petroleum Company, the world's largest producer of Normal Hexane, offers you quick service and a dependable solvent supply. Made to rigid specifications by modern fractionating methods, Phillips Solvents assure you of uniform quality every time.

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*Chemical Products Department*  
BARTLESVILLE, OKLAHOMA



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'Tis said "A new broom sweeps clean" . . . does a good job. We are a new source of supply for the Grain and Seed trade. Our customers tell us we are doing a tip-top job of getting high quality Grain and Seed Testing Equipment and Supplies to them in a hurry.

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Vegetable Oil Processing  
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Manufacturers of  
**SOYTEX FILTER CLOTHS**

Standard of Quality in the Vegetable Oil  
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Let Us Quote You on Your Next Requirements

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**FABRICS**

1255 West 4th St.

Cleveland 13, Ohio

## In The MARKETS

### SOYBEANS EASIER AFTER ALL-TIME HIGH

After reaching an all-time high for soybean futures on the Chicago market at midmonth, soybean prices sought lower levels the last 2 weeks of January.

High in March futures for No. 2 soybeans was \$4.41 January 17. By January 30, March soybeans were being quoted at \$4.07, or 34c lower. The readjustment was not unexpected as the market trend had been up since mid-October.

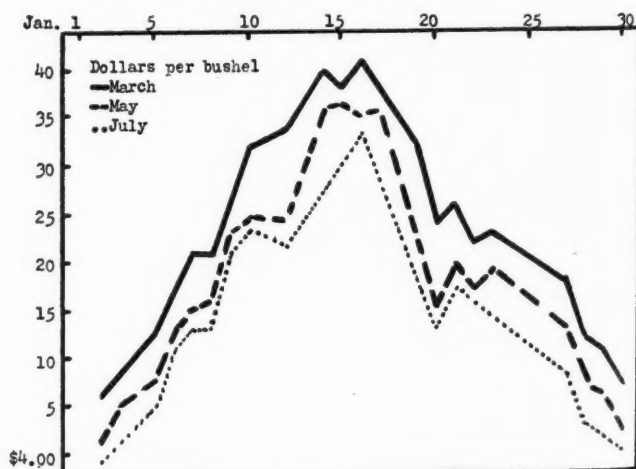
Markets for soybean oil meal and soybean oil also became easier the last 2 weeks of the month after showing early strength. But the month's spread for these items was comparatively narrow. Lower prices for grains and fats and oils generally were an unsettling factor.

March futures opened at \$4.06 Jan. 2, then worked sharply higher until Jan. 17. Smaller crushers were especially active in the market, paying top prices to fill nearby orders. But processors were not so aggressive as buyers the latter part of the month.

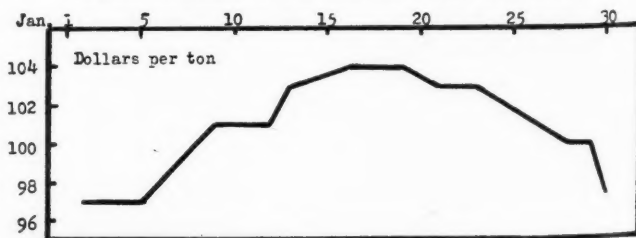
The soybean oil meal market was strong until the 19th, with supplies relatively scarce. Spot bulk soybean oil meal, Decatur basis, opened the month at \$97, to be quoted at \$103 Jan. 16-19, the month's high. By month's end buying interest was lacking in all except meal for quick delivery and the market was being quoted again at \$97. There was trading in only scattered cars.

Crude soybean oil in tankers, f.o.b. Decatur, was quoted at

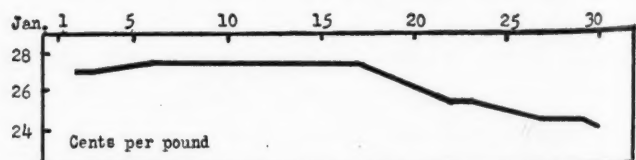
NO. 2 SOYBEANS, CHICAGO FUTURES



BULK SOYBEANS OIL MEAL, DECATUR BASIS



CRUDE SOYBEAN OIL, TANKERS, F.O.B. DECATUR



SOYBEAN DIGEST



\$27.50 most of the first 2 weeks. It was being quoted at \$24.00 by the end of the month, with buying interest lacking. Trading was generally light in the vegetable oils markets during January.

• **SOYBEAN STOCKS.** Stocks of soybeans on farms January 1 totaled 50,749,000 bushels equivalent to 28 percent of the 1947 production. This is considerably larger than the 37,374,000 bushels on farms a year ago, equivalent to only 19 percent of the 1946 production.

Although the 1947 soybean crop was the smallest since 1941, farm stocks on January 1 were the highest since 1944. Farmers in the heavy-producing North Central States have tended to hold a larger proportion of their 1947 crop on farms than for the past three seasons. In this area alone farm stocks amount to about 46 million bushels compared with less than 33 million January 1, 1947. The South Atlantic states also indicate larger stocks than a year ago. In contrast the South Central states (with the exception of Kentucky) report extremely low farm stocks—only about one-half as large as a year ago.

Farm disappearance between October 1, 1947 and January 1, 1948 amounted to 133 million bushels from a total supply of 184 million bushels. This was the smallest disappearance for a like period in the 5 years of record. Disappearance for the same period a year ago was 166 million bushels from a supply of 203 million bushels.

**STOCKS OF SOYBEAN ON FARMS JANUARY 1**

	1945	1946	1947	1948
	—Thousand bushels—			
New York .....	146	48	102	61
New Jersey .....	124	108	97	92
Pennsylvania .....	244	207	178	87
Ohio .....	6,126	5,428	3,413	5,448
Indiana .....	7,094	7,147	5,221	7,608
Illinois .....	11,881	13,536	12,483	16,299
Michigan .....	804	790	452	879
Wisconsin .....	355	228	157	210
Minnesota .....	961	1,311	2,455	3,312
Iowa .....	8,142	7,420	5,697	8,945
Missouri .....	1,998	2,059	2,154	2,574
North Dakota .....	21	24	30	39
South Dakota .....	44	69	113	155
Nebraska .....	57	89	140	195
Kansas .....	405	446	370	434
Delaware .....	211	240	246	180
Maryland .....	196	260	224	203
Virginia .....	436	581	409	770
West Virginia .....	5	6	10	6
North Carolina .....	950	1,269	1,345	1,762
South Carolina .....	54	42	62	85
Georgia .....	36	27	38	59
Kentucky .....	396	288	360	515
Tennessee .....	283	220	154	93
Alabama .....	240	119	144	74
Mississippi .....	347	363	472	399
Arkansas .....	614	769	600	187
Louisiana .....	124	142	239	66
Oklahoma .....	34	31	9	12
Texas .....	2			
United States .....	42,330	43,267	37,374	50,749

• **FUTURES TRADING.** Futures trading in agricultural commodities under the Commodity Exchange Act increased sharply in 1947 as compared with 1946, the U. S. Department of Agriculture stated on the basis of year-end figures compiled by the Commodity Exchange Authority.

The soybean futures market in Chicago resumed activity, but the volume remained small.

Volume of futures trading in soybeans and soybean products as reported by the Commodity Exchange Authority included:

Soybeans, Chicago Board of Trade, 18,875,000 bu.; soybean oil, New York Produce Exchange, 180,000 lbs. in 1946, 960,000 lbs. in 1947; soybean oil meal, Memphis Merchants Exchange Clearing Association, 38,800 tons in 1946; 298,900 tons in 1947.

• **SOYBEAN INSPECTIONS.** Receipts of soybeans inspected in December decreased seasonally to 6,311 cars compared with 12,285 cars in November and 30,830 cars in October, according to reports to the Department of Agriculture. December inspections brought the total for the first three months of the season to 49,426 cars compared with 56,425 cars for the same months in 1946 and 57,735 cars in 1945. The average for the month of December for the crop years 1941-45 was 5,883 cars.

The quality of the soybeans inspected in December was con-

SERVING THROUGH SCIENCE

# CONTROL SEED ROT AND DAMPING OFF

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# Spergon

Reg. U. S. Pat. Off.

## SEED PROTECTANT

Field tests made by various experiment stations have proved conclusively the value of treating soybean seed with Spergon.

In several tests—emergence of treated seed over untreated seed was improved by as much as 10 to 20 per cent.

### HEAVIER STANDS ASSURED

Spergon gives seed immunity to soil-borne fungi, which tend to cause decay and damping off.

It accelerates emergence—insures heavier stands and bigger yields.

### ECONOMICAL—SAFE TO USE

Spergon treatment is inexpensive. It takes but 2 oz. of Spergon to protect a bushel of seed.

Furthermore—Spergon is safe to use. It is non-injurious to humans and animals, and it cannot harm seeds even when used to excess.

**SPERAGON IS COMPATIBLE WITH LEGUME INOCULANTS**

Write for special bulletin, "Spergon Seed Treatment for Soybeans."



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**Dimensions and Weight**  
 Length, overall.....32"  
 Width, overall.....17 3/8"  
 Height, overall.....21 1/4"  
 Shipping Wt., crated  
 200 lbs. (approx.)

## OK BAGGING SCALES

For all kinds of material that needs bagging—flour, feed, soybean meal, etc. Semi-automatic and always accurate. No further lifting of bags on and off scales. When the product is bagged, it is also weighed.

Price, f.o.b.  
 Cedar Rapids, Iowa

**\$230.00**

Immediate Delivery

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siderably below that for the preceding month, only 67 percent grading No. 2 or better compared with 82 percent in November. Eighty-six percent graded No. 2 or better for October-December this season compared with 70 percent last season and 92 percent in 1945.

• **COMMERCIAL SOYBEAN STOCKS.** Production and Marketing Administration's commercial grain stock reports for Dec. 30-Jan. 20, in 1,000 bu.

	Dec. 30	Jan. 6	Jan. 13	Jan. 20
Atlantic Coast .....	492	574	313	467
Northwestern and Upper Lake .....	2,017	1,968	1,919	1,828
Lower Lake .....	5,132	4,960	4,954	4,969
East Central .....	3,061	2,885	2,646	2,666
West Central, South- western & Western .....	2,957	2,906	2,798	2,715
Pacific Coast .....				
Total current week .....	13,659	13,293	12,630	12,645
Total year ago .....	22,434	21,704	21,598	21,332

• **SOYBEAN GLUE IN PLYWOOD.** Soybean glue consumed by the softwood plywood industry in November totaled 1,927,000 lbs., reports Bureau of the Census. This compares with 2,063,000 lbs. in October and 2,361,000 lbs. in November 1946.

Other glue consumed by the plywood industry in November in pounds: casein 420,000; phenolic resin 3,637,000 lbs.; other 246,000 lbs. Total glue consumption for the month was 6,230,000 lbs.

Soybean glue stocks totaled 1,300,000 lbs. Nov. 30; and total stocks of all glue were 3,820,000 lbs.

• **STANDARD SHORTENING SHIPMENTS.** Reported by members of Institute of Shortening and Edible Oils, Inc.

January 3 .....	5,196,082
January 10 .....	8,084,659
January 17 .....	8,587,829
January 24 .....	6,636,771
January 31 .....	4,578,712

The grand total of shortening and edible oil shipments for the fourth quarter 1947 as reported to the Institute was 809,547,000 lbs. December shipments totaled 248,971,000 lbs.



## Government Orders

• **U. S. FATS AND OILS EXPORTS.** U. S. exports of principal vegetable oils and oilseeds, in terms of oil, totaled approximately 624 million pounds for January-November 1947, compared with 628 million for the same period of 1946 and 241 million, the 1935-39 average. Lard shipments showed a decrease of over 94 million pounds while cooking fats and margarine were down about 8 and 22 million, respectively. Peanut exports, in terms of oil, amounted to approximately 67 million pounds, or 50 million more than the comparable figure for a year ago. About 53 million pounds of tallow were exported, compared with 10 million last year and an average of less than 2 million during 1935-39. Shipments of soybean oil and soybeans, in terms of oil, amounted to over 100 million pounds or 15 million more than in 1946.

Tentative export allocations of fats and oils for 1948 approved by U. S. Department of Agriculture include 265,600,000 lbs. of liquid edible oils, 900,000 lbs. of margarine and 22 million lbs. of soap.

USDA approved an emergency allocation of 13,500 lbs. of soybeans to the United Kingdom for planting in Gold Coast in January.

Olive oil from all countries has been put under U. S. import control through an amendment of War Food Order 63 announced by USDA.

The Department also announced that existing agreements covering the exchange of soybean for olive oil will apply only to shipments of olive oil from the producing countries prior to March 1.